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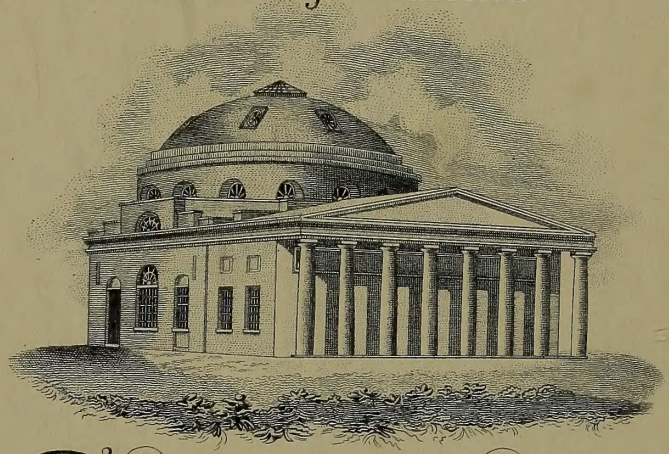

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University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

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An

Inaugural Dissertation

On

Dysentery.

Submitted to the examination

of the

Provost, Regents, and Faculty of Physic,

of the

University of Maryland.

for the

Degree of Doctor of Medicine,

By

James Gibson,

Chester County

Pennsylvania

Feby 9th 1846

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Dysentery

By this term we are to understand an inflammation of the mucous membrane lining the colon. The inflammation is not restricted entirely to this part, for by post mortem examinations it has been found to have extended to the small intestines. We have no opportunity to ascertain the condition of the membrane, in the incipient stage of the disease, but we have reason from analogy to believe that it first becomes engorged, and thickened precisely as, from similar causes, the mucous membrane does in the nasal passages.

The greatest pathological evidences are found in the large intestines, as

ulcerations, red patches protruding from the surrounding parts the inner membrane thickened, also thickening of the muscular and peritoneal coats, and even gangrene of a portion of the colon, admitting the content of the intestines into the cavity of the abdomen. To this may be added in some cases general inflammatory evidences and marks upon the peritoneum.

When death ensues soon after the attack in some cases according to the reports of some writers no other marks were found, but a slight erysipelatous blush supposed to proceed from the presence of an acrid and highly irritating fluid engendered within the intestinal canal. It were but reasonable to suppose that, in these cases, some slight evidences of dysentery

may have been present but that death occured from congestion upon some vital organ diverted thereto by an undefinable cause.

The liver invariably suffers in this disease either structurally or functionally and it is proper to add that all authors concur in the opinion of the universality of the latter.

Symptoms. This disease is often ushered in by a sense of lassitude, want of appetite, nausea, uneasiness of the abdomen, soon amounting to pain of a griping character, particularly in the umbilical region attended with frequent inclinations to go to stool; sometimes the inclinations do not differ at from what occurs in simple diarrhœa, and the evacuations discharged are feculent. As the disease becomes developed, the desire to evacuate the bowels is more frequent and impa-

tunate; the secretions are thin, mucous, sanguinolent, sometimes mixed with nodules of scybalous matter; the blood is sometimes florid and pure, more frequently interspersed with shreds of mucus or albumen. Tenesmus is one of the most constant, and characteristic symptom attending this disease, and the violence of this painful symptom affords a pretty accurate knowledge of the degree of danger of this affection.

Among the general symptoms we must first take notice of the fever. This in the sporadic form of dysentery is usualy symtomatic only, and often delays its appearance till the local affection has assumed a considerable degree of intensity; but in other cases the disease sets in with rigors, and the ordinary precursors of a febrile attack.

The tongue is furred, and in bad cases

covered with a dark crust, the fissures of which show a dull crimson hue beneath; the lips are often dry and cracked, and the countenance, as in nearly all abdominal maladies, indicate great depression.

Causes. As is the case with inflammation affecting other portions of the alimentary canal; vicissitude of atmospheric temperature, may unquestionably be considered as a predisposing cause; acid, unripe fruit and indigestible substances of all kinds, by irritating the lining membrane of the intestines, may act as an exciting cause; a sudden reduction of temperature, or if the body be exposed to the chilling effects of a humid and cold night air, the exhalants of the surface will become torpid, and the blood will be driven from the ex-

ternal capilliary vessels, to some internal organ, and will give rise to inflammation of the intestines; in consequence of the liver and other organs becoming engorged, by which the functions of the portal vessels are disturbed

Prognosis. A correct knowledge of the etiology of the disease will aid us materially in making up our prognosis. If for instance we believe there is present portal congestion, and also admit the connection between the portal and hemmorrhoidal vessels, we can readily explain and account for the good results following bloody discharges, and can therefore augur favourably. The discharge of mucous alone renders the case intractable and unmageable, and the prospect unfavourable; cold clammy colliquative sweats with a tympanitic condition of the

bowels with sanious and involuntary discharges, are considered very unpromising symptoms. As the State of the skin is an object of much solicitation, its persistance in heat and dryness are very unfriendly towards a favourable termination, but a uniform moisture of the whole surface is regarded as most favourably. The abatement of tenesmus and tenderness of the abdomen are hailed as harbingers of good.

Treatment. In the treatment of this affection, it is absolutely necessary that we should constantly have in view, the proximate, and remote causes.

The principal objects to be accomplished seem to be; - 1st. To transpose the excitement to the surface and to equalize action; 2nd to procure the evacuation of those irritating substances

which linger in the alimentary canal; 3°. to allay the irritability of the large intestines; 4°. to restore the tone of the alimentary canal.

The order in which these ends are to be accomplished, depends in some measure upon the nature of the cause, and the progress that the disease has made. When the disease has arisen from repelled perspiration, the most natural indication would be to restore the cutaneous secretion. But this may not be easy to accomplish, when the system is in a state of plethora, and although action might be produced upon the surface, the morbid excitement might still continue in the intestines. As a preliminary measure and one of great importance would be to diminish the amount of the circulation. This will enable us to

relieve the organs which are engaged. In the commencement of the disease it will be proper to abstract blood from the arm, or what would answer better; from the surface of the abdomen by leeches, if they can be procured. Nothing can aid more effectually to accomplish this than the exhibition of an emetic, which will more certainly determine the fluids to the surface, and at the same time it will diminish the general and local excitement. But it is not less important for the purpose of clearing the stomach of those acrid secretions and ill digested substances, which must otherwise pass the tract of the alimentary canal and thereby aggravating the irritation already existing. The article most commonly employed for this purpose is ipecacuanha, which

for vigorous constitutions may be rendered more energetic by the addition of a small portion of tartarized antimony. The bowels are to be freely opened, and if the secretions of the liver appear to be redundant or morbid it will be advisable to combine ipecac with calomel. If the temperature of the surface be unequal, we should endeavour to render it uniform by the application of warmth, or by stimulating applications to those parts which are below the natural standard of temperature. To do this it will be necessary to immerse the feet and legs in warm water impregnated with salt, or mustard-seed. The vapour bath will have a salutary effect, when the skin is dry, and the surface generally is below the natural temperature. The action which is ex-

cited by these means should be kept up by nauseating diaphoretics, by warm, bland, diluents drinks, and by carefully protecting the surface of the body from sudden impressions of cold air. Sometimes blisters are indicated when we wish to make a stronger impression upon the skin, & create a kind of excitement which shall be less subject to vicissitudes; one of considerable magnitude may be applied over the abdomen, or to the wrists and ankles if these parts should be wanting in healthy excitement.

2. Our next indication, and one of great moment, will be, to procure the thorough evacuation of the intestines, in order that they may not be irritated by the passage of scybala from time to time, and as this end has in part been accomplished

in the first part of the treatment, it will be necessary, to administer castor oil, or a compound of senna and the sulphate of magnesia, two hours after giving the calomel. This will be the case when the biliary system is disordered, and dysentery results from the acrid secretions of the liver, Therefore having freely evacuated the intestines in the on= set of the disease, the repetition of cathartics must be determined by circumstances. And now after having cleared the bowels, of all irritating and indigestible substances, it will bring us to our next, or 3d. object which will be to allay the irritation, and inflammation of the mucous mem= brane. This will have been in part done by the means used in trans= posing action to the surface, and in

evacuating the irritating substances, which still remain in the intestines. But we must endeavour to accomplish this by more direct means. Blood-letting is not less important for this purpose, than for favouring determination to the surface, local bleeding by cups or leeches applied to anus, will be preferable, to general, as thereby we effect, more immediate relief, without so much exhausting the powers of the system. The next most important agent for allaying irritation is opium, for nothing can be more important, than the judicious employment of anodynes in this painful malady. In the intervals, between the employment of cathartics, our object should be, to place the irritated organs, at rest as near as possible. This we should endeav-

cir to do by the administration of liberal doses Opium in the form of Dover's powder in doses of ten or fifteen grans, and repeat as often, as the circumstances of the case may demand. An enemata composed of starch, or flax-seed tea, and tincture of opium, in the proportion of eight or ten ounces of the former to one, or two drachms of the latter. Opium thus administered, has been found to give more efficient relief than when given by the mouth. But it is not merely by its anodyne influence that it is beneficial, it acts also as an astringent, by suppressing the copious secretion that takes place from the diseased membrane, and also promotes, the cutaneous secretion. During the exhibition of these more powerful agents, the aliments, and drinks, should be se=

lected, with great care and attention.
Substances of easy digestion, should be
selected, such as arrow-root rice-water
and toast-water, may be freely given
during the period of excitement.
Thirst is generally very troublesome, and
the patient will so importune the
attendants, for water, that, although
little is taken at a time, a large
quantity is drank, in the course of
a few hours, distending the stomach,
and irritating the intestines, giving rise to colic pains;
cold water should be prohibited un-
less given in a very small quantity
at a time, and for this reason, that
it generally suppresses perspiration which
it is our object to preserve with the
most scrupulous care. The best drinks
are those of a demulcent character,
such as barley-water linseed tea
or infusion of slippery-elm bark; these

should be given warm and indeed; they are thus almost as pleasant to the patient, as when of the temperature of the atmosphere.

When the irritability of the bowels has been subdued, and the morbid excitement past; the appetite has in some measure returned, it is necessary to be cautious in the choice of diet, and drinks; the patient may be indulged, in more solid farinaceous preperations, also in mutton soup, prepared with rice, beef tea &c.

The last object to be accomplished in the treatment, of this disease is to restore the tone of the diseased organs; for this purpose it will still be necessary to continue the exhibition of opium, for if suddenly withheld, after the bowels have been for sometime accustomed

to its soothing influence, the intestines will relapse into convulsive action, and irritate themselves. Convalescence, when the disease has been effectually subdued, is generally the work of nature, every caution being observed that her efforts are not not foiled by injudicious interference; but sometimes the disease will have been so severe, and so long protracted that, when at length, the morbid excitement has been overcome, there is not vis vitae left, sufficient to establish and maintain the recuperative process.

When the system has been reduced to a feeble state, the pulse languid, though perhaps frequent, the surface bedewed by a clammy perspiration, the countenance expressive of exhaustion and distress—

while at the same time the evacuations are frequent and exhausting, with copious discharges of blood and mucous; a compound of the following. Opium half a grain; sulphate of quinine one grain; Kino two grains, will be found useful, given in the form of a pill, once in three or four hours, according to the urgency of the symptoms. The acetate of lead has been recommended under similar circumstances. This article is said by some to be admissible even in the early, and inflammatory periods of this disease; it is said not only to suppress copious discharges of blood and mucous, but also to soothe and allay the irritation of the diseased organs.

There are many indiginous medical plants which have obtained reputation in the treatment of dysentery, being given in the latter stages of the disease. Those which are slightly aromatic and mucil-

laginous, are particularly recommended. The blackberry root is often employed. The Geranium Maculatum, one of the most pure astringents, and which grows abundantly in almost every part of our country, is highly esteemed. They both may be employed in the form of decoction.

Astringents may also be employed in the form of injection. The acetate of lead is occasionally used in this manner, in combination with astringent decoctions, and with opium. The decoction of oak bark is one of the best vegetable astringents for this purpose - that of gall nuts is very similar. These should be combined with something of a demulcent character, as starch or slippery-elm, and with the tinct. of opium. Advantage is sometimes derived, at this period from occasionally chafing the surface of the belly with brandy,

in which cloves and other spices have been infused.

During recovery, the surface of the body should be carefully protected from all vicissitudes of temperature. For this purpose, flannel should always be worn.

James Gibson
Chester County
Penn

An

Inaugural Dissertation

on a Typhoid Fever

submitted to the examination of

the

Board of Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

by

Lewis Selby

To

Samuel Chew M.D.

of Baltimore,

Professor of Hygiene & Materia Medica

in the University of Md. and to

William Power M.D.

Adjunct Professor of

the Theory & Practice of Medicine

in the same Institution,

this humble essay

is most affectionately dedicated in

grateful remembrance

of the many acts of kindness received

by their obliged friend

The Author.

In compliance with the requisition of that noble and time honoured custom, the observance of which has been so judiciously imposed as a 'sine qua non' in the successful accomplishment of our Preliminary studies, and which has so materially assisted in the elevation and advancement of that science whose progress is onward and to perfection: in compliance with this *sanctioned (*custom) by the usages of ages, and by the example of those brilliant stars who shine so conspicuously in the medical Galaxy, I now undertake my arduous yet pleasing task. It cannot, of course, be supposed that one, young and inexperienced as myself, almost practically unacquainted with the application of those precepts inculcated in theory, and standing even beyond the verge of the threshold, that one so circumstanced could urge his pretensions on the score of originality, or even claim to give a complete treatise upon so extensive a topic as the one selected. I will therefore state that the following essay is offered as a concise & unpretending

ding report of facts ascertained by observation and study, and it is hoped that the annual thesis carefully made will shield its author from the censure of the Faculty, and its many defects from their well merited criticism.

Much, indeed, has been written upon this subject. Volume upon volume has issued from the press, doctrine upon doctrine inculcated, and still this disease bids defiance to our efforts remaining, I might almost say, a stigma upon the medical art. Yet we are justified in hoping that Time, the great Physician, will eventually place Typhoid fever, like the ordinary maladies of our nature, completely under the control of our progressive times.

Typhoid Fever.

To give a perfect history of this very interesting disease with fidelity and impartiality, did time and inclination permit, would, perhaps, be one of the most difficult undertakings in which I could engage myself, and would require more perseverance and candour than is possessed by me or any other individual. Besides the impossibility of collecting all the information necessary for that purpose, by all the labour and industry that any one person can exert, there is such a propensity in the human mind to assume theory as the leading principle, and to strain facts and observations so as to accommodate them to such principle, that it appears to be a rare thing in medicine to find an accurate description of any ~~such~~ disease entirely free from such a taint. It may be confidently asserted that to theorize on any subject is to be scientific, and that Physician who practices without theory is certainly an empiric.

Every student of Medicine is taught this from the commencement to the termination of his studies. Even in Anatomy and Surgery, the whole of which would appear to be entirely mechanical and mechanical, we still see the dazzling influence of theory. It is not wonderful then that the science of Medicine should be so replete with the beautiful delusions of cause and effect, of reasoning and induction. Yet notwithstanding the many and important improvements that have resulted to the practice of Medicine from this mode of proceeding many fatal errors have crept in under the fascinating cloak of theory and, perhaps, more from the bias in the description of the nature and symptoms of diseases and their treatment than from any other source.

Sensible, therefore, as I am of the danger on that score I will avoid in this my essay, all reasoning upon the subject and content myself with a brief and unpretending compilation of facts, ascertained by observation & study.

With regard to the existing of typhus fever we have no very satisfactory accounts, as it is spoken of even by the oldest writers as a disease long and familiarly known under the names of Putrid fever, Low fever, Nervous fever, & has, in all probability, afflicted mankind from time immemorial.

From our deficiency of the knowledge of Medicine on the Western Continent prior to the Eighteenth Century it is unable to ascertain at what period this disease made its appearance among the Colonists, or whether, indeed, it was not original with its primitive possessors. Some physicians, conversant with the diseases of the aborigines, have declared them to be exempt from this affection; yet we are not warranted from the imperfect inquiries thus far made in arriving at any such conclusion. The opinion has also been advanced that the disease does not make its appearance during the summer months of temperate climates, but Dr Nathan Smith, to whom I am indebted for many hints and suggestions contained

in this Essay, must confidently assert that he has met with it at all seasons, in every month, in fact, in every day of the year. The disease we are about to consider depends for its existence upon the presence in the body of a specific poison. Much discrepancy of opinion has existed, and, indeed, still exist in regard to the contagious character of this affection, but a careful observation of facts has convinced many of our most intelligent physicians that it is, indeed, contagious, under peculiar circumstances eminently so. That distinguished observer, Louis, admits that it may be readily propagated from one individual to another. Then can be no doubt of the existence of every intermediate gradation between the common forms of fever and typhus, so that it often becomes a matter of nicety to discriminate ~~between~~ to which class a particular case or number of cases properly belongs. Yet the disease now under consideration is sui generis, independent of, and unconnected with any other, depending entirely, as before observed, upon a

specific poison, and producing certain local anatomical lesions as an invariable result, which sufficiently demonstrate its individual character. There cannot be the least doubt that Typhoid fever has been frequently confounded with and mistaken for a low and obscure Remittent, and that the great fatality which previously marked its progress was the result of malpractice suggested by this error in diagnosis. It remained for modern pathologists to establish its individuality and to prove conclusively that although much has been done, much still remains to be done by experimental analysis.

To enter minutely into a detail of the symptoms of Typhoid fever is considered useless in this communications, as they are found in the works of systematic writers, and as my limited observation will not embrace them all, so many and varied are they. I will confine myself to the most important and striking. One of the most common symptoms which ordinarily precedes an invasion of this disease

is manifested by an irritable state of languor or perhaps, I should say indifference on the part of the sufferer. She is reluctant to make any exertion, either mental or physical. She is listless, and often apprehensive of some impending evil. His senses lose their natural delicacy. The expression of his countenance becomes sensibly altered. She loses his appetite. His bowels are irregular, often bound but sometimes emptied. There is occasionally some giddiness. She complains of wandering pains in some parts of the body. His sleep is unsound and unrefreshing. These symptoms continue, perhaps, for several days, and its regular onset is then marked by a slight rigor or chill. Dr Nathan Smith observes that in the commencement there is some degree of chilliness felt by the patient, but that it does not amount to a distinct chill. Louis asserts that the fatality of the case is proportionate to the intensity and duration of the chill. This symptom is considered as of the most constant attendants in the incipient

stage of this disease. The state of the skin, in regard to dryness and moisture, is different in different individuals. In the intervals between the chill there is almost always an increased heat of the skin. Sometimes it is moderate in degree and imperfectly diffused over the body: at other times it is high and burning and unequally distributed. This morbid heat is subject to many variations in the course of the day. In very grave cases Dr Bartlett says they are of constant daily occurrence. In many cases though there is a great degree of heat perceived immediately upon the touch, yet it is soon overcome by the heat of the finger touching, and soon after appears of greatly decreased. This feature is considered by many to prognosticate a mild form of the disease, and to justify us in hoping for a favorable issue. In some cases the heat often appears mild in the beginning, yet it is increasing in a manner every moment, so that excites an uneasiness to the touch of the physician, as if the heat came from a diff-

part of the body. This sweat suppose denotes the severity of the attack, and is looked upon as a premonitory symptom for an unfavourable result. In a majority of cases there is a marked exacerbation of all the febrile symptoms in the afternoon. In some cases there is more or less moisture. Sometimes the sweat is limited to short period following the exacerbations, or breaks out in the night during sleep. It has been observed that this sweating is in no degree proportionate to the intensity and duration of the morbid heat, and, indeed it is often continues even after convalescence has fairly set in. At times it is very profuse, standing in large drops on the face, forehead & breast, giving the cuticle a peculiar appearance.

The character of the pulse in the early stage of this disease is varied. As a general rule its frequency is proportionate to the severity of the attack. It is considered more frequent in female than male patients, and may be

said to range between 70 & 140 in the minute.
It may also be said that this disease is esteemed much the more fatal ~~and~~ or dangerous as the pulse appears much the more frequent or quicker, more irregular as to time and more intermitting in its strokes. Frequently the natural softness and volume of the pulse is preserved throughout the whole course of the disease. When it is very frequent it feels sharp, is small and has often a peculiar undulating stroke, or a second small beat following each full one.
The cough which frequently attends this disease is usually very slight, not sufficiently marked indeed, as to attract the attention of either the physician or the patient himself.
Great reliance was formerly placed upon a careful consideration of the patients breathing insomuch so that the physician derived more of his prognostics from the respiration than the pulse. In the present state of our art less importance is attached to it, as it generally subsides upon the disappearance of the disease of which it was the effect.

When this unnatural state of the system has continued for some time, the mind, and in fact the nervous system in general exhibits evident signs of impression. The disturbance in the intellectual powers, before alluded to, as evinced by the great disinclination to exertion, by the listlessness or actual prostration is gradually increased until it amounts to a confirmed delirium. This delirium may be mild and of but short duration, manifesting itself at irregular intervals, and then gradually, but entirely disappearing; or it may be of that wild and violent character which strongly indicates the severity of the attack; or it may be the low and muttering delirium so frequently referred to by authors, in which the patient indulges in wild & incoherent wandering from which he may be aroused for a time, but as soon as the stimulus is withdrawn his mind relapses into its disturbed and irregular action. Even after recovery, it is asserted that the moral

sensibilities are blunted and singularly inclined to depravity. Louis says there is seldom any morbid condition of the mind left after the establishment of convalescence. The memory also is said to be sensibly impaired. The sense of hearing is said to be morbidly acute. Sounds which the patient has been accustomed to hear without even exciting attention become disagreeable, or even painful. Every precaution in such cases is therefore taken ~~in such cases~~ to lessen the intensity of sound. At other times it is remarkably dull. In some cases there is the most prolonged and obstinate watchfulness, interrupted occasionally by a short but unrefreshing slumber. This symptom is observed more frequently in the early periods of the disease and in the serious cases. In others there is more or less disposition to drowsiness or coma. This latter symptom is more or less marked according to the intensity and rapid march of the disease. The muscular system participating in the

nervous debility, is greatly effected. The muscular ~~system~~ strength of the patient is prostrated from the very commencement of the disease, constituting one of its most striking and characteristic phenomena. One of these forms of muscular affection consists of irregular spasmodic contractions and has received the name of subsultus tendinum. It is principally met with in the forearm & hand. The appearance of the tongue in many cases is but slightly changed during the whole course of the disease. In others it is coated with a white fur which gradually disappears and becomes brown with a red stripe round its edges. In other cases it becomes dark over its whole surface, glazed & crossed by cracks or fissures.

One of the symptoms presented in this disease consists in the gurgling sound detected by pressure in the abdomen, especially in the Iliac region. It is important as means of a correct diagnosis. Tympanites, or a flatulent distention of the Colon is another

symptom frequently presents in this disease, appearing at times in the commencement, and persisting during the whole course of the disease. Dr. Bartlett says it most frequently appears during the second or third week of fever. There is generally an aversion to food with nausea and vomiting. The loss of appetite generally continues from the beginning to the end of the disease, and its return is looked upon as one of the most cheering indications of returning health.

But one of the most frequent, characteristic and satisfactory phenomena presented in this affection is the diarrhoea which almost invariably accompanies it. Sometimes it manifests itself in the very beginning of the disease; at other times it is absent for one or two weeks. As a general rule, however, it may be said to occur in its earlier stages. The stools, upon these occasions, are generally liquid, of a yellowish or dark brown colour with an exceedingly offensive and fetid odour. Epistaxis, or haemorrhage from the

nose is of common occurrence in this disease. At times it is very profuse, requiring the interposition of the nurse or Physician for its stoppage. Again it may be small in quantity, amounting to a few drops.

Another interesting feature in this disease is the presence in a majority of cases of small red spots called rose spots, which are seen most frequently on the lower & middle portions of the chest & upper parts of the abdomen. Some suppose this eruption to be an almost invariable accompaniment of Typhoid fever. They are generally of a round shape, and although they do not seem to project above the surface of the skin, they can be felt by passing the finger over it. Their number varies, ~~but it rarely exceeds~~ sometimes they are not more than six or eight, whilst at others they are almost confluent. Their size also varies but it rarely exceeds that of a Split Pea. When these spots are pressed upon by the finger, their colour disappears, but returns again immediately afterwards. These spots usually

appear about the second week of the fever, & after remaining for one week or ten days, they gradually disappear. Vesicles filled with a limpid fluid, situated above the cuticle, & about the size of a large pin head, to which the name Sudamina has been applied, also make their appearance. They are scattered upon the neck & shoulders, & sometimes, over the whole body. After remaining for some days, these also gradually pass away. It may be proper to state that the blood sustains a remarkable deterioration in its fibrine, and in many cases becomes almost limpid.

In regard to lesions of the abdominal viscera I shall confine myself to those only which are the most important & characteristic. The whole contents of this cavity are generally more or less affected during the progress of this disease, but there are certain local determinations or effects which deserve our especial notice. The mucous coat of the stomach in this affection occasionally exhibits some deviation from the healthy state. In some

In some cases it is injected in patches of various extent; in others it is partially softened so that this mucous membrane is easily detached from the subjacent cellular tissue. Ulceration of this organ has been known to occur. This is, however, but rarely presented the duration being usually confined to inflammation & softening. It is seldom that the mucous membrane of the small intestines is found through its whole length. The portion lining the duodenum is more rarely altered, perhaps, than any other. In the remaining portion of the small intestines we find more uniform lesions. The redness of the membrane is, by far, the most common appearance, and is most usually met with in that portion adjoining the caecum. Modern pathologists have observed the tendency of this inflammation to terminate in ulceration. But by far the most common form of intestinal ulceration is that arising from inflammation of the mucous follicles of Peyer & Brunner. It is this peculiar lesion that

stamps individual character upon the disease.
21 is found in no other disease. These glands when
in their natural state are very minute, vary in
number being in different situations. They are
very distinct and isolated at the pyloric orifice
of the stomach, and also very numerous towards
the extremity of the duodenum they gradually
diminish in number, where they are larger,
than in the other portion of the bowels. In the
jejunum & Ileum they are very numerous, &
form themselves into groups. The greater vitality
of these glands compared with others portions
of the mucous membrane renders them peculiarly
liable to inflammation, and, per consequence
ulceration. The solitary glands of Brunner
are less frequently affected than those of
Peyer. These glands & Peyer, as they are un-
affected in all other diseases, by their diseased
action in Typhoid fever, constitute its true
pathology. This ulceration is, in the vast
majority of cases, superficial or confined
to the inner coats. But occasionally it in-
volves all the coats and terminates in perforation.

The escape of the contents of the bowels into the peritoneum being followed by copious purulent discharge. When the patient recovers and the ulceration terminates upon one of the mucous coats a separation process takes place, the result of which is cicatrization. The only alterations of the large intestines which especially deserve notice in this affection are discussion by fluctus and ulceration. These deviations from healthy standard occur in about one third the cases, the flatulent distention perhaps more frequently than the latter symptom. The symptoms above detailed constitute, perhaps, the most important pathological features of the disease under consideration. In the language of Dr Bartlett, some are more important, more frequently present, and more characteristic of the disease than others. Some are chiefly interesting and important as diagnostic symptoms or indications; others as prognostic. It very rarely happens, indeed, that in any single case they are all united. Having thus given, as fully as our limits allow,

the enumeration and description of the symptoms of Typhoid fever, we will next proceed to the treatment of the same, and shall endeavour to be as brief and concise as possible.

The treatment of this affection is so unsettled and varied that it would be impossible for me in my limited bounds to give anything like a description of the various methods of treatment so frequently resorted to from time to time, and so strenuously supported by their particular advocates. So great then being the difficulty on this score, I think it will be advisable for me, as consistent with my narrow limits, to adhere to some particular plan of treatment as a general rule, selecting, of course, the one most generally received and adopted.

The method pursued by Louis in this affection has met with such decided approval, and, indeed, has proved so successful in a vast majority of cases that it deserves, and shall alone receive especial notice.

At a very early period of the disease he employs general bloodletting, and repeats

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this as often as the severity of the symptoms may demand, or the strength and vigor of the patient justify. In many cases where the attack is mild, or the system of the patient not very strong he contents himself with a single bleeding. But if the constitution is vigorous, or the attack a very severe one he repeats the bleeding until the severity of the symptoms is abated. He supposes that this treatment not only shortens the duration of the disease, but also lessens its mortality. In a more advanced period of the disease when the febrile excitement is somewhat moderated he never resorts to bleeding, but under such circumstances considers it employment injurious. At the same time he directs the use of refrigerant drinks or of seltzer water, to obtain the effects of its carbonic acid gas. He says these should be given in large quantities, & as freely as the patient may desire. He advises the use of mucilaginous enemata, & if the discharge from the bowels continue to be frequent and prostrating, laudanum

or opium in substance should be added. Louis places great reliance in the tonic treatment when the prostration is great the pulse weak, and when the general febrile excitement has in some degree subsided. Of this class of medicines he prefers Sul. Quinia giving it in large doses.

This article is certainly one of our most important accessions to Materia medica. In cases of great prostration, with feeble pulse it often arouses the languid energies of the system, imparts tone and vigor to the circulation, and its effects are soon discovered upon the secretions. In cases when there is relaxed skin and profuse perspiration this medicine given in grain doses every 2 or 3 hours checks the discharge, imparts warmth to the skin, and general vigour.

If there be diarrhoea he makes use of tonic and astringent injections. He places no confidence in use of blisters, but says they sometimes add to the danger of the disease and generally to the inconvenience of the patient.

She approves of sponging the body with cold water or vinegar and water, as it is very pleasant to the feelings of the patient and exerts a beneficial effect upon the disease. Whenever perforation of the intestine occurs he resorts to the employment of Opium, and relies greatly upon its virtues. She thinks this is beneficial also in allaying some of the nervous symptoms which so frequently occur in this disease, as subsultus tendinum &c. She does not approve of the application of ice to the head, or of the use of leeches when the delirium is violent, but in such case, if the face is at all flushed, he resorts to general bleeding. She directs particular attention to the condition of the bladder, providing against retention of urine &c. She attaches much importance to rest, fresh air, and cleanliness in the course of the disease, and to the exercise of proper precaution during convalescence. Such is a very brief and concise outline of the course of treatment pursued by the distinguished French pathologist, and although

it must be admitted that no single rule can be observed in all cases, yet the one above detailed has proved eminently successful, & is the one most generally adhered to.
By observing the general plan of treatment above detailed, and by treating the local symptoms as they severally arise upon the most approved and judicious principles, it is confidently believed that the practitioner may be instrumental in conducting many cases, otherwise fatal, to a happy issue, and that this disease, formerly the opprobrium of our Ars Medicalis, may, in a measure, be divested of its fatal and alarming character.

An

Inaugural Dissertation

on

Gastritis.

Submitted to the examination of the

Provost, Regents & Faculty of Physic

Of the

University of Maryland

for the

Degree of Doctor of Medicine.

By

W. S. L. Ashley.

Acute Gastritis.

Acute Gastritis may be divided into idiopathic and Symptomatic. The first of these varieties is so rarely seen, that many authors have denied its existence, and M. Louis states that during six years experience at La Charité in which period he noticed the details of six thousand cases of this disease and of five hundred dissections he did not meet with a single instance of fatal idiopathic gastritis.

When serous membranes are affected the inflammation generally spreads with rapidity over the whole surface but when mucous tissues are involved the inflammation is usually circumscribed and has little or no tendency to increase in size.

In consequence of this fact acute Gastritis seldom or never affects the whole of the mucous membrane of the Stomach, but shows itself either in several distinct spots or in one isolated patch — Spontaneous acute Gastritis is however seldom seen and

rarely fatal. One tissue only is at first affected mostly the mucous and it almost always occurs after swallowing poisons or irritating substances.

Symptoms.- The symptoms are local and functional; the local are acute pain in the Epigastrium, accompanied by a burning sensation which sometimes extends to the oesophagus and occasionally to the pharynx, causing great thirst uneasiness and anxiety. The functional are nausea, retching, vomiting, increased heat in the stomach an almost insatiable desire for cold drinks and great prostration.

The pain in the epigastrium is invariably increased on pressure or by swallowing hot or acid substances and at the same time the vomiting occurs oftener and becomes more distressing. Any thing taken into the Stomach even cold water is very soon rejected and its irritability is so great that frequent efforts are made to vomit after its contents are expelled.

The abdomen is slightly swollen and the respiration short, quick and almost entirely thoracic. The pulse is frequent and small though in a later stage of the disease it may be quick small and tense. The extremities are cold, the skin slightly moist and the countenance expressive of great anxiety. The tongue is generally red at the tip and edges but is not to be considered as pathognomic as it may show very few alterations or be nearly healthy and at the same time coincide with a severe acute inflammation of the Stomach

Sometimes the patient complains of sore throat and on examination the fauces are found inflamed. Singultus also occurs and is often very troublesome. The patient is restless and evidently in great pain, he lies on his back as the position best suited to relieve the tension of the abdominal muscles. The matter vomited in the early stages consists of the fluids and other substances taken into the Stomach but towards the acme of the disease a glairy

mucous mixed with bile is ejected and not unfrequently near its termination a substance resembling coffee grounds in appearance.

The bowels are generally constipated, the extremities become cold, the skin is shrunk and clammy, the features are sharp and pinched, the retching and vomiting more distressing, hiccough & extreme prostration ensue, coma insensibility and death close the scene.

Sometimes a very sudden and unexpected remission of pain takes place a short time before dissolution. Intense inflammation of the stomach is generally very rapid in its progress and if fatal frequently destroys life in twelve or twenty four hours. Dr. Elliotson states that "this disease is frequently preceded by a spasmodic pain at the pit of the stomach, running through the back affecting respiration & and relieved or at any rate not increased by pressure, producing no thirst, and decreased by stimuli.

That after existing for some time it gives rise to or is followed by inflammation".-

This Gastrodynia however is seldom seen as the commencement of gastritis, and though requiring different treatment could never be mistaken for the symptoms accompanying the burning pain before described.

Causes.- The causes of gastritis are almost always direct though they may be indirect. The direct causes are such as commonly produce other inflammations

Thus cold water taken into the stomach when the body is over-heated, corroding substances, acid poisons, spirituous liquors &c may all produce gastritis. Articles of food which would produce no ill effect in one person might in another cause the most intense inflammation.

Large quantities of food of an indigestible character, and imprudent or luxurious diet, foreign substances taken into the stomach, sudden emotions of the mind of a depressing character,

the sudden cessation of gout in an extremity, wounds, contusions &c may produce this disease. Corrosive sublimate and arsenic, when rubbed on the skin in certain quantities or when inserted &c rectum may indirectly excite inflammation and sloughing of the mucous membrane of the stomach, altho' with it they have not been in contact.-

Treatment.- The first step to be taken is to ascertain the cause if possible, as if it be a poison, or acrid substance neutralize it or use the stomach pump if it be at hand. After evacuating the stomach, pump in water and rinse it out; or if an acid be present, use magnesia and water, if an alkali, dilute vinegar &c, if a stomach pump be not at hand a prompt emetic should be administered such as the Sulph: Cupri: or Sulph Zinci: and followed by copious draughts of warm water to promote their action. After the poison is expelled the gastritis must be treated as though produced by any of its

numerous causes. The first indication is in favor of blood letting, but that should be cautiously practiced. The best plan would be to feel the pulse while the blood is flowing and if after a small portion is lost the pulse rises then it may be advisable to continue and take a tolerably large quantity. Leeches applied over the stomach say five or eight at a time may be of efficient service, and the blood can be kept flowing from the bites by a warm poultice which at the same time is relaxing the abdominal parietes.

The patient generally chooses his position, that which is easiest being mostly on the back with the legs slightly flexed.

The thirst and sensation of heat can be best alleviated by cold water, iced lemonade, lumps of ice held in the mouth &c but too great a quantity of fluid should not be taken at any one time as it is very liable to produce nausea and vomiting

Sedatives and anodynes should be cautiously

administered, so as to avoid all irritation; the best of these is Sulph. Morphiae. with magnesia if the stomach will retain it, if not the black drop or some preparation of Opium, which will not be ejected.- Hydrocyanic acid in small doses sometimes has a very beneficial effect in allaying the irritability of the stomach and quieting the nervous system. Limewater and milk injected per rectum frequently have a good effect. Laxative enemata occasionally may be used for the purpose of evacuating the contents of the bowels. Blisters on the epigastrium or sinapisms are decidedly beneficial as counter irritants in many cases, particularly when used after depletion.

No nourishment should be allowed except small quantities of sago, rice-water mucilage, gum Arabic or other similar drinks for four or five days, and the usual diet even after all the symptoms are removed should be slowly resumed. Great care and precaution ought to be used to prevent

a relapse which in many instances is fatal and if such is not its termination it mostly changes to a chronic form & becomes very difficult to relieve. If the pain while the case is under treatment and the disease not subdued, suddenly ceases and the epigastrium is not tender the worst consequences may result, and we may generally conclude that gangrene has taken place.

A Thesis

Surgical Dissertation

on

Bilious Remittent Fever.

Submitted to the examination

of the

Board, Regents, and Faculty of Physic,

of the

University of Maryland,

for the

Degree of Doctor of Medicine

by

W. Grove Deal

W. Grove Deal

The great diversity of opinion that exists in reference to yellow fever, one best medical authors, makes them not the least difficult of the many subjects that the student is called upon to investigate.

Bilious Fever, the variety we have taken up for consideration, whilst it is one of the most prevalent, has come in for its share of contention and seems only of late to have received that close investigation, at least in reference to its pathology, that its importance demands. The methods against which we were chiefly so faithfully warned, of "treating disease for its name without listening to her voice as she speaks by almost unerring signs, has been, and we fear is yet in this disease carried to a deplorable extent.

Prof. Chew last summer in one of his clinics says "This disease taken in its inception and treated properly, is one of the most manageable, treated improperly it is one of the most fatal with which we have to contend."

In many textbooks it is "the malady"

and causes more deaths than every other form of disease put together. We have seen seasons when throughout a whole neighbourhood, some of most families were down with it, and its fatality very great indeed. Every year it is more or less fatal in those regions.

It is sometimes divided into several varieties, such as inflamitory, mild, bilious, gastric &c. These, however well to recollect in treatment, we have thought are calculated to confuse the mind of the student, as the same case may be inflamitory and pass through all the conditions indicated by these terms; indeed we think we have seen in the same case, an union of nearly all of them. We prefer therefore to use the term familiar to us, as embracing all those conditions; 1st Because we have the high authority of Prof Bartlett and others; 2° For the reason that we know no better name for it.

We are not able, and less disposed, to partake in the discussion that has been called forth, as to the propriety of this or any other

or any other of the names given to it as dig-
nant of its true character; we would rather
bide our time, for the disclosures which close
investigation will make in reference to it, as
declared by its lesions, symptoms, and the re-
lationship between these, so far as it can be
discovered, than to take up any theory how-
ever plausible that those disclosures may
prove, as discoveries of like character have
proven others to be, the mere illusions of
fancy, or what is more criminal, seeking
a name at the expense of truth and sac-
rifice of human life. I am, sure, as I con-
fess myself to be, sufficiently acquainted with the
history of medicine to know that he who names
a disease from a single symptom or set of symp-
toms, without knowing to some extent the rela-
tionship referred to, or treats but a name, is
liable to make others as well as himself feel,
that he has "leaned upon a broken reed."
Others as well as the medical profession have
reason to rejoice that a more rational method of

diagnosis, and treatment, half obliterated.—

The various periodical forms of fevers appear to be nearly allied to each other. It certainly have often seen the intermittent turn into remittent, the remitting of the last become intermissions, or shorten until the fever became continued. The causes that produce the mildest form, acting more intensely upon a person who, for some reason or other, has a predisposition to the disease, appear to produce the severer forms. Prof Bartlett in speaking of this disease last winter said he looked upon bilious remittent, intermittents, and congestive fever merely as forms of the same disease.

Its Etiology—

Here we confess ourselves to be perfectly at sea. The conflicting views of leading authority have unsettled our former faith, without in its stead leaving us any thing tangible on which to rest. Prof Bartlett says there is no

-tial cause consists in an unknown influence or power to which the name miasma has been given, but in what this influence consists is more than we can tell. Dr Watson says the primary, exciting cause, consists in certain invisible effluvia or emanations from the sur-face of the earth which we formerly called miasmata, but a more fashionable and more appropriate name in some re-spects, is malaria. Dr James Copland says the exciting cause is chiefly, if not solely, exhalations from stagnant water or from clayey or marshy soils. Dr Eberly says in the vicinity of marshes we often trace the various grades of miasmatic fevers, from the most violent and fatal to the simplest and mildest forms, as we progressively remove from the focus of deleterious exhalations to-wards the circumferance of its influence. On the borders of the soil whence the miasmata eminate, if very copiously engendered, con-tinued and very highly aggravated cases

of bilious fever will prevail; at a greater distance from this point, mild remittents will predominate, and at a still more remote situation intermittents will be the most common. From the same circumstance the first diseases which occur in miasmatic districts are generally intermittent fevers; as the season advances remittents occur, and gradually prevail with great violence; as the cold season advances and the extrication of miasmata begins to diminish, intermittents again are more common, and the remittents gradually disappear. Prof. Dunglison says it is clear, that the terrestrial emanations must be different from those that occasion intermittents, inasmuch as we find remittents in localities where intermittents are wholly unknown. Dr. Wardrop, who is opposed to the view that this and intermittent fever are modifications one of the other, says, both the exciting and predisposing causes are different; whilst he admits the

miasmatic origin of intermittents, tells us that "re-
mittents are ordinarily excited by internal cau-
-ses," such as repeated habit of body, produced
by neglect of the intestinal canal, or perhaps
proceeding from bad food, or occasioned by
the debilitating operation of summer and
autumn, by intemperance, exposure &c.

Dr. Bell says "a period of several
years has now elapsed (see Bell & Stokes)
since he recorded his disbelief in the hy-
-pothesis of periodical fevers generally, being
caused by marsh air, or by seperate, pecu-
-liar, or specific emanations from the soils
of marshes, or from decayed vegetable mat-
-ters designate such cause by whatever term
you choose, miasm or malaria. There are no
circumstances assigned as competent to its ev-
-olution which often are not found without
such result; and e converso it is claimed to
be present and operative in the production of
periodical fever when the commonly assigned
circumstances are wanting." He asserts too,

thus differing from Dr Cheely, that remittant procedes intermittents in the mural circle of diseases of endemic origin. This was true during some years that we resided where it prevailed. There is something apparently unaccountable, supposing the malarious origin of this disease, in the assertions of some that it has prevailed in districts where no such emanations could occur, and that all the supposed prerequisites for its production may be present without producing it. "In mountainous districts in the interior of the West India islands at an elevation of five or six hundred yards above the level of the sea, amongst series of ridges, not directly exposed to currents of exhalations from swampy and low grounds, in dry and sandy, also in argillaceous soils, where no putrifaction was going on or at all suspected, it prevails."

Dr Watson speaks of a certain temperature, a certain degree of moisture, the presence of all the four elements of the ancients, as being requisite for the production of this poison, and says, in this country large districts on account of the lowness and levelness of the lands are prolific of disease. Yet in Ireland it is moist, and no doubt there sometimes exists the combination here spoken of yet we are told it does not prevail there. That it is not a necessary result of the decay of vegatable matter, the last named author brings in proof, the rotting cabbage of convent garden, the neglected dust holes of London, and the testimony of Dr Wm Ferguson; or, that it is even necessary; whose evidence he says also refutes the idea of animal matter being an element in the formation of malarious poison; and that neither animal nor vegatable decomposition are sufficient to generate fever of any kind. He thinks there

is good reason to believe that in all easy the
fevers emanating proceed from parts of the sur-
face that were flooded those dried, rather than
from parts that are still wet or putrid.

I recollect two seasons one wet the
other dry; in the first vegetation was very rank
and a sickly fall was expected; in the fall
of the other, a healthy time was anticipated;
during the fall following the wet summer the health of the people was unusual,
the other was noted as one in which there
was an unusual prevalence of fever.

There are some peculiar views held
in some places, a few of which we will state,
how correct we are not prepared to say. A
position to the northern side of a marsh
or swamp, is said to be more unhealthy
for a residence than any other; residency
immediately on the border of a marsh, creek
bay or river, are said to be comparatively free
although these same remote may be very sickly
trees around a dwelling are said to be a

defence by some, by others the reverse is thought to be the case. There is no doubt that for some reason or other, location, even in the same immediate vicinity, has much to do both with its prevalence and fatality.

Without any cause so far as our senses are guide, two dwellings similarly circumstanced, so far as marsh, position, and habits of the people are concerned, will present in this respect a remarkable contrast; one house will be visited yearly, the other, year after year is passed over.

The cultivation of the soil has a tendency to diminish its prevalence; a general attention to ditching appears to have almost entirely driven it from places where it was common.

Age, appears to me to exercise more influence than is supposed. In ten years residence in regions where this disease is endemic, we recollect but three deaths occurring in children under eight years of age, neither of these died; intermittents

are much more common among them, it may be because they are much less exposed than adults. The influence of exposure to the damps, heat, & fatiguing labours in the hot sun is often marked. "Too great inanition, too great repletion from an animal diet, and the dejecting passions of the mind", are said to predispose to it, and render it more dangerous. Irregular habits appear to have the same effects. We are inclined to believe that improper diets, and exposure, have much more to do with its production than habits of drinking; indeed we very much doubt if drinking at all predispose the individual to take, although when attacked, they make the prognosis much more unfavourable.

I have read, or heard it stated, that negroes were not liable to take this disease; this is most certainly a mistake, as some seasons it has been very frequent and fatal among them.

My attention was lately directed anew, by some remarks in a lecture by Prof Chew, to what I thought years ago I noticed. In a lecture delivered the 13th of December, 45. speaking of cold water as "preventative of fevers, he said, that in the lower counties of this state "many physicians and others say that remittant fevers are less frequent, and that pure cold water is the cause". When mentioning to some intelligent planters this subject years ago in the districts referred to, they, firm in the belief of its prophylactic virtues, cited plantations where untill the erection of ice-houses the fall fevers were expected, and certain visitants; after which and allowing the free use to all, not a single case occurred. The villiage of Friendship in the lower part of A. A. County some years ago was considered very sickly, but is now, and has been for the last eight years almost entirely free from fevers. What is remarkable in reference to

its long exemption, is, that since that time several ice houses were built, which yearly are filled for the use of all the villagers, and the neighbours who aid in filling them.

When causes no doubt have united in effecting this change, the people are probably more careful than formerly to guards against exposure; general attention has been paid to draining the low grounds around; great improvements have been made in the manner of villages; these all, must therefore be taken into the account; as was suggested in the lecture of the Professor, this subject is deserving of the attention of the physicians.

Terminations.

It may terminate in speedy and complete convalescence: The remitting may become more distinct, until it becomes intermittent, or they may become less, and less appreciable, until it becomes continued in its character. Then in proper treatment,

or other causes, it may involve various organs, producing various complications; thus, if the disease does not, may produce death. Sometimes it runs its course very rapidly its continuence, depending very much upon the grade of the fever.

Symptoms.

1 The initiatory. Uneasy sensations are sometimes felt for several days producing an indisposition to bodily or mental exertion; frequent gaping with pain in the back, head, and sometimes pain or soreness over the whole body. These, may singly, or combined, be present, or they may all suddenly pass away, sometimes to return with increased force: a sensation is sometimes felt like cold water running down the back, or the impressions created by hairs on the body.

2 The chill. The impressions or feelings spoken of, will be soon followed by a chill, sometimes a complete rigour, which may be repeated.

The phenomina of this are strange as they are invariable. The patient yawns, the skin becomes pale, the capillary veins engorged with blood, so that the surface becomes blue, especially around the nails, mouth, and eyes. The pulse is feeble, small and thready. The sufferer sometimes during this stage is extreme. This stage may pass over hardly appreciable by the patient, or all the symptoms may be most fearfully exaggerated. Thirty minutes is thought to be the duration of this stage; this may be the average, but we know a case in which it lasted twelve hours.—

3 Hot stage. The marked phenomina of the chill becomes marked, until it merges into a condition presenting "febrile flushes, or alternating of heat and cold."; until the hot stage is fully established. As this is being established there is often nausea, and occasional vomiting.—

Tongue. This is usually covered with a white coat, but may be if the disease is severe or as it advances, brown, or even black; and occasionally

dry, cracked, and "chapped".

Skin. The surface is generally very hot and dry, the face injected and turnid, the eyes prominent, watery, red and sometimes very yellow. The thirst is generally very urgent.

Pain. The pain in the head, back, and extremities, is sometimes severe; the pain in the head often persists during the whole disease. Generally they complain of pain over the epigastrium during the whole of the disease; this, is sometimes absent during its whole course, so that the most careful examinations cannot detect any evidence of its existance.

Pulse. This which was weak and irregular during the former stage now becomes full, large, strong, and frequent.

Nervous symptoms. Dr Bartlett says delirium is not very common, coma is more common than delirium." Dr Copland who describes this disease according to its various

grades, as mild, inflamitory, bilio-inflamitory, and adynamic, speaks of delirium as being present in the first three, and low delirium in the last grade. In most cases we have seen, delirium has been present in this stage, however mild the fever, or short its duration; and in very severe cases nearly all the time.

4 Remission. After the hot stage has lasted for some time, averaging twelve hours, presenting the symptoms named more or less prominently, according to the severity of the attack, they begin to abate; a perspiration breaks out; the nausea eases; the tongue becomes moist, the edges and tip rosy, or the whole coat comes off leaving it entirely clean and of a bright rosy colour; the skin becomes of a nearly natural temperature; the pulse soft and slow; the delirium passes away; in short, we may have a distinct remission. But whilst sometimes it is so marked as almost to

constitute an intermission, in other cases the abatement is scarcely perceptable, even to the physician; running on to become continued unless soon controlled. The remission varies in length as well as degree; sometimes that which under ordinary circumstances lasts twenty, is so short as hardly to be perceptable. After the remission the same course, of fever and remission, is passed over; the symptoms becoming more aggravated or milder; being influenced by the severity of the attack, the prevailing epidemic, the constitution and habit of the individual, the treatment, or various other influencing circumstances. Its tendency to convalescence is indicated by the abatement in severity of its various symptoms, and exacerbating, the increased length and more marked remissions. —

3 Complications. If convalescence is not soon accomplished, it may soon involve in a greater or less degree, the

stomach, intestinal canal, brain &c.

These each in there turn have given to this disease a name, according to the particular view desired to be maintained, some looking upon the lesions found in them as the cause of the disease, others as the result of causes, as yet but little understood. They are certainly very important, as we have one or more of these organs inflamed in nearly every case; these complications, must therefore have to some extent, a controlling influence on our choice of therapeutical agents.

This tendency says Mr Dunglison is one of the most important circumstances to be borne in mind. "The condition of the tongue, which is usually covered with a white or brown coat; the nausea and vomiting, often of bile, the sense of painful weight and tension in the epigastric and hypochondriac regions; the yellowish hue of the tunica conjunctiva, and the bilious impregnation of the urine

sufficiently indicate the gastro-enteric or bilious complication". Prof. Bartlett speaking of the epigastric distress, tenderness, and fulness, said, "they probably depended upon congestion of the spleen and liver."

Dr Copland says, "among the earliest are inflamitory states of the mucous surface of the stomach and duodenum; this often extends to the small and large intestines". The liver is more or less disordered in every case of this disease as is evidenced by its increased or lessened secreting of bile, as well as by the change that is said to take place in the quality of the secretion. The spleen is also effected, hence the pain on pressure, and often, the greatly increased size. Pulmonary complications are rare, although they are said sometimes to occur in the form of bronchitis, catarrh, and pneumonia of low or congested form.

The brain is often more or less effected. This tendency we have sometimes

seen the physician stroive long against in vain, being forced to see those wordings which too plainly tell the danger, and often forebode a fatal termination.

Dr Sanglis in speaking on what he terms malignant remittant, says, it is very liable to be complicated with some organic mischief: the alimentary canal, the liver and the brain are especially effected. We have not only the symptoms already cited, some of them significant of the complications here named, but each one of these complicating has its language, that almost unerringly speaks to the intelligent practitioner. The nausea and vomiting with pain over the region of the stomach, point to changes going on in that organ. Diarrhoea, if present, pain, or fulness of the abdomen will lead us to expect an inflammatory condition of the intestinal canal. The bowels, and

usually, are either regular or costive in this disease; it is not often we have any diarrhea unless when the lower bowels are inflamed. The character of the stools, the biliary injection of the eyes, the abundant evacuation of bile either by vomiting or the stools, the pain or hypertrophied condition of the liver will point us to that organ as a seat of mischief. The discharges are different in different cases; sometimes they are white or clayey, dark, black, or greenish; this, is sometimes the result of mercurials in part, and sometimes the concomitant, or diminished secretion of bile.

Pain in the left hypochondriac region with enlargement of that organ, shows us that abnormal action is going on in the spleen. When there is evident alteration of expression and manner of the patient; pain in the head; nausea and vomiting, becoming more serious; restlessness; then burning delirium; frequent and

and hard pulse; a parched and dry skin, the mischief is there going on in the brain.

It is not necessary to enumerate further, the symptoms resulting from the various sequelæ of this disease; which will always more or less modify our treatment.

Pathology.

Two organs appear to be the only ones in which alterations are constantly found, the liver and the spleen; the stomach next to these most frequently is found altered; the brain, lungs and heart present generaly nothing marked: although sometimes nearly all of them are more or less altered.

To American authors we are indebted for our knowledge of the morbid anatomy of the liver and spleen.

Dr Stevenson gives us a plain and full description of the different livers examined by him. Dr Power

examined different cases, in all of which the same invariable condition of this organ was found. Prof. Bartlett during the last winter exhibited to the class two livers, one received from the Alms house, the other taken from a patient who died of the disease in the Infirmary, both strongly confirming the description first given by Dr Stewardson. So far then as investigation has been able to discover its pathology, it has been demonstrated that this organ enters in to a large share of its action.

There is a striking change of colour, which Dr Stewardson calls, "grey and olive intermixed, the natural reddish being nearly extinct, or only faintly to be traced." This, generally extends through the organ. This organ is generally hypertrophied its consistance is somewhat lessened. The gall bladder is found

well filled with fluid bile. What the character of the action are that produces these changes has not been determined; Dr Bartlett says "they do not appear to be inflammatory.

The spleen is preteraturally dark and enlarged; the stomach is more or less inflamed, the mucous coat more or less altered.

Dr Richardson says, that in six cases examined by him the elliptical plates were inflamed. In reference to these cases, Prof Bartlett says, he is satisfied he made two mistakes; first, he took typhoid for bilious; again, he mistook the lesion in some cases, so these pass for nothing. The Prof. says the pathology of this disease may be regarded as two fold, or consisting of two elements; 1 An unknown modification of the nervous system: 2 The sanguineous congestion that takes place in the liver, spleen, and stomach; these are present

in all forms of this fever."

Dr Copland speaks of alteration in the liver, spleen, and mucous surfaces, such as are "the result of acute action, in connection with deficient power"; also, of various alterations which occur "in the mesenteric glands and pancreas". "The lungs are sometimes congested, infiltrated, condensed, or inflamed". "The pleura and pericardium often contain some dark sanguineous serum, and the substance of the heart is frequently soft, flaccid and readily torn, the cavities being occasionally dilated more especially after the adynamic state of the disease". "The changes within the cranium consist chiefly of congestion of the veins of the pia-mater and sinuses, with a dark fluid blood, and sometimes of the effusion of serum into the ventricles and between the membranes."

It is to be hoped that the few, but

important steps taken towards a correct pathology of this disease, may be followed by still greater, until it is fully settled. It would not be wondered at, that a disease assuming so many forms or grades; now highly inflammatory, then the lowest adynamic type; with its gastric-gastro-enteric, and numerous other complications; should present various lesions after death: and yet, since careful investigation has been made few are found to be always present.

May it not be found in this fever, as French and American pathologists have demonstrated in Typhoid, that its constant seat is a single point, and from thence it extends itself involving other organs only secondarily. —

Diagnosis.

This is generally not a matter of much difficulty in this disease,

although it has often been taken for yellow fever; and typhoid has been taken for remittant. We often hear in country practice of the prevailing fever becoming typhoid, but such a disease as idiopathic typhoid, we might suppose never occured. Several cases came under my own observation in my own family, one of which was fatal, which were taken for, and treated as bilious remittant, in which, I now recognize as true cases of Typhoid as ever occured in New England. Its gradual access; loss of muscular strength; flush in the face; inactivity of mind; low muttering; indiferance; drowsiness; twitching of tendons; picking of bed clothes and bleeding at the nose in the fatal case, in which, there was also near its termination, involuntary evacuations. As it regards the gurgling sound, the lenticular, or rose coulered

eruptions, I cannot say weather they were present or not, as I never heard of them until last winter as present in any disease, and of course did not look for them.

As it regards its resemblance to the ardent seasoning fevers of southern climes, Dr Copland says, "the exacerbating & remittant seldom continue above fourteen or eighteen hours, so that one takes place daily, varying however in intensity, so that they usually present a quotidian or double tertian type; but in the ardent seasoning fever of Europeans the type is continued, or a remission does not occur till after thirty hours; a different train of symptoms then appear." - Yellow fever is contagious, this is not; the first usually attacks strangers, the last is usually indiscriminate in its attacks; the remittant attacks those who have had the disease, as well as those who never had it; the yellow fever those who never

before had the disease; the one, is the endemic of towns, the other of the country; remittant is always more or less prevalent, yellow fever only at particular seasons of the year. The confusion, says Dr Copland, that has existed in reference to a proper diagnosis of this disease, has often been produced by descriptions of different epidemics, in which some faint resemblance has been discovered; and without taking into consideration all the circumstances of the place, variety &c. the physician has been disappointed and the patient destroyed.—

The matter emitted in bilious fever throughout its whole course is bilious, whilst in yellow fever it is clear, then yellowish, and lastly dark or completely black.

Prognosis.

This it will be clearly seen will depend upon such a variety of circumstances that no fixed rule can be laid

down. It is, we believe generally favorable, and if the patient is a person of good habits, of tolerably fair constitution, not too advanced in life; if the treatment be proper, they will always get well. The opposite conditions render the chances of recovery very few. The mortality is considerably increased by a disposition to tamper with it, by administering, what may be found more or less abundantly in many planters houses, Lee's anti-bilious, Morris' Brandreth's and Indian Vegetable pills; or by following in the beaten track of heavy doses of blue-mass, calomel &c.

Treatment.

This we conceive to be plain; and will generally prove successful if understood.

1 Bloodletting. The propriety of full bleeding at the onset of the disease when there is high arterial action is unquestionable, keeping in view the tendency to con-

termed fever." The condition of the patients would be our guide in leading us to adopt general or local bleeding; the last would be advisable even when general was inadmissable. If there was evidence of gastritis or any other itis in any part of the system, we would apply as near as possible to the location of the inflammation untill we saw evidence that injury was resulting from it.

2 Emetics. We confess ourselves favourable to the old plan of emptying the stomach by this mean, if called in early, unless there is as evidence of local inflamation. I am aware how frequently the stomach is inflamed, but I believe, they oftener would prove benificial than they are administered, when ill-founded fear or prejudice, causes them to be withheld. We have seen them act like a charm appearing to strangle it in its incipiency.

3 Cathartics. To keep the bowells soluble is the only indication suggesting these. To meet this we would give salts and magnesia & some other mild cathartic. If a more active cathartic was desirable, Calomel might be used followed by a saline purgative, or castor oil. — An enemata should be administered when it is necessary to evacuate the bowells, if from any cause it is not proper to administer a cathartic by the mouth.

4 Opium. I have seen this recommended in large sedative doses where there is inflammatory action of the mucous surfaces, to allay irritation, never having seen it administered unless to check diarrhoea we are not prepared to decide in reference to it —

5 Sul. of Quinine. My own observation, confirmed by the best authority, points to this as "the remedy". If the attack

was not very severe we would wait for the action of the preparatory means generally advised, and for a remission, before its admission; but if the issue was uncertain, if I thought the patient might soon die, if life & death were to be decided in the coming day, we would give the quinine without waiting for any remission. The testimony in favour of this practice from various quarters of the country during the past year is very strong, and calculated to break in upon the long established prejudices against the early use of quinine in barks, in the early stages of remittents. (Dr Parish Am. Jour. of Med. Scien. 1845.) Dr Power in a clinic early the present session, on presenting it for a severe case, said "every moment of time you lose in preparing your patient for quinine, the gastro-enteritis is becoming

worse and more."

6.- Stimulants. These should only be employed, when the disease has become adynamic & the powers of life appear to be sinking. In a case of considerable interest to myself, the surface of the body and the extremities were rubbed with salt and mustard, sinapisms were applied to the hands and feet with warm and stimulating applications to the epigastrium. Internally, wine and brandy were freely administered, with complete success:- success in preventing one of the severest attacks from which there ever was a recovery.

7.- Diet, drinks &c. In regard to diet it should be absolute untill convalescence is fully established; then mild, nutritious, unstimulating diet should be allowed, untill they are out of danger of a relapse. Soda water may be given to relieve nausea.

Ice, & ice water, may be allowed without stint throughout the whole progress of the disease when desired by the patient. With this we need no other diaphoretics. The external application of iced or cool water by a sponge is not only very grateful but often very serviceable in allaying the heat of the surface. Pounded ice should be put in a bladder and kept constantly to the head when the brain is at all implicated. Rest, perfect quiet of body and mind must be required.

We have briefly passed over what we deem important in the treatment as far as a fixed course need be designated; but the Physician must in this, as in other diseases, watch the changes occurring in the disease itself, & brought about by his treatment; and be prepared to meet the indications. For this no fixed rules can be laid down. Before we

close we will notice the treatment of Dr Power in several cases of enlarged spleen, a condition so often met with as the result of intermittant, and remittant fever. The recipe I beleive was—

- - - - Fowlers solution ten drops and five grains of quinine; this amount three times a day. An external application was also made over the organ, of the ointments of Mercury and Iodine. One of the cases, a sailor who had had intermittant on the Spanish main twelve months before, was remarkable, not only for his large spleen, but also for his clayey, doughey appearance. Under this treatment the spleen was soon reduced to its normal size, and the complexion of the man became clear and healthy.

The end.

An

Inaugural Dissertation

on

"The Haematology of Phthisis Pulmonalis"

Submitted to the Examination

of the

Provost, Regents and Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

by

Francis Donaldson

of Baltimore

Dedicated

To

Wm Power M.D.

Member of the Society for medical Observation
of Paris. Physician to the Balt. Alms House &c &c

by

his obliged & attached friend

The author

"Numeration is a condition without attention to which it will be impossible to arrive at any precise result, or to explain facts. Without it we can neither make any laws, nor establish any science" Louis.

"Haematology will lead to greatly increased knowledge of the real nature of diseased states in spite of the opposition, which any return to the Humoral Pathology is sure to excite in the minds of those who regard it as an exploded Spermatic system" Carpenter.

In the year 1840. M. Andral presented to the Academy of Sciences of Paris two memoirs containing the result of some experiments made by M. Gavaret themselves to ascertain the variations in the proportion of the different organic elements of the blood in physiological & pathological conditions. In 1844 a subsequent work of his with the title ~~base~~ of "Pathological Hematology" was translated into English & published in this country. It has been by these publications that the attention of the profession has been called to a subject which for ages past has interested more or less all scientific men. Being the intimate connexion of the circulation with every part of the system & their dependance upon it for their nutrition, whenever there was any disturbance of the functions or any lesion of structure of any viscus or tissue, they very naturally regarded

it as a mere local manifestation of some
disease of the Blood; and with all man
reason in these diseases, some of which app-
eared to be peculiarly fatal, in which no
perceptible lesion could be detected in any
structure of the body. In attempting to define
what these supposed modifications of the
blood were, even as far back as the time
of Hippocrates numerous theories were invent-
-ed. But unfortunately for the Science they
were nothing but theories. Book after book
were published to support this different doc
trines but what few facts they collected were
made to bend to their preconceived views.
Thus Vitalists, Solidists & Humoralists quarrel-
-led about the truth of their respective notions,
& the world for centuries was no wiser.
Not only as to the Etiology of disease but
in every department of medicine they made
but little progress. Men, instead of observing
systematically the symptoms during life, & the

appearances after death, & carefully noting them, were content, with the bodies of their patients (often the victims of their ignorance) smoked before them, to theorise & dispute as to the cause of the disease. I wish I could add that this was the case only in the first ages, but truth forces me to acknowledge with a blush that it was left for the nineteenth century to discover the only proper mode of investigating diseases, the only true Method of pursuing the Study of medicine. It was reserved for Louis to apply the principles of Inductive, Baconian Philosophy to medicine & thus to become, in fact the father of our Science — When we reflect upon the rapid strides medicine has made within the last half a century & remember for how long a period it was almost Stationary; when we compare works written even in the last century with their indefinite descriptions of diseases, many of which the Studies of Pathological Anatomy has since proved to be mere Symptoms; with their long chapters

upon the supposed virtues of certain stomach-tonic drugs, which became some practitioners had had some one or two patients who recovered while using the medicine: & the few lines devoted to differential diagnosis & pathology, when we compare them with the monographs of the present day, show the imbalance, daily increasing, which is attached to clinical instruction & observation: when we reflect upon all this, ought it not to cheer us & make us hope that the prospects of one of the noblest sciences & most fascinating of studies is now onward.

We have now the foundation for a building, the great beauty of which consists, in the fact, that every well educated physician can aid in rearing the superstructure.

M. Andral has opened to our view a field for investigation, the surface of which is as yet scarcely trodden upon, and which to the careful & attentive observer may produce an abundant harvest— he has established many useful facts, which will assist the practitioner in forming his diagnosis

and if not directly, certainly indirectly in the treatment of some diseases. What physician has not been puzzled during the first two or three days of an attack to distinguish between a phlegmasia & a pyrexia; & what an influence bearing it has upon his treatment, in the one case the lancet may save the life of his patient in the other it may be the cause of his death. Of what value it is to be able to decide positively, as we can by analizing the blood, whether or not a bruit de soufle is caused by anaemia or by organic disease of the heart - How often has the hectic flush been mistaken for an evidence of plethora - In these instances & in many others Andral has decided the condition of the blood to be so materially different that if it does not ascertain the diagnosis, at all events it will assist us materially in forming it -

Observation & experiment have taught us that the buffy coat & the cupped appearance, upon which formerly so much reliance was placed as an indi-

-ation for bloodletting, can not only occur in cases of anaemia, where it would be most decidedly injurious, but also that they depend so much upon the size of the orifice & the form of the basin that its value is very questionable, & that the only sure evidence of inflammation or of anaemia is from an analysis of the blood. It has been moreover proven by experiment that the effect of V.S. on the red globules is very great, & but very small upon the diminution of the fibrin, which is important as it in a degree confirms the ~~result~~ conclusions at which M Louis arrived after his experiments on the effect of bloodletting in certain phlegmasias; & is a silent rebuke to certain boastful practitioners, who talk so confidently of cutting short by V.S inflammations; & has forced us in a measure to admit that the physician's power consists in his ability to assist nature in her recuperative efforts.

As far as we can ~~reason~~ form any rules of therapeutics by a priori reasoning from pathology does it not appear reasonable to treat the

blood to correct certain modifications in its organization; experiment having proven the facility with which certain substances are absorbed into the circulation, imparting to the different excretions their peculiar odour & properties. What further argument need we have than that of Dr Buckle's discovery of the beneficial effects of the phosphate of Ammonia to correct the excess of lithic acid in the blood in Rheumatism, of the value of testing the different diseases of the blood.

It is much to be regretted that M. Louis, whose name as the founder of the numerical School must be handed down to posterity side by side with Harvey, Jenner, & Laennec, has not given us in his already invaluable work on Phthisis the minute analysis of the blood, arranged in his peculiarly systematic manner.

When I determined upon the selection of this as the subject of my thesis, it was my intention to have collected a large number of cases, but having been furnished by a friend with the translation of a part of another

work of Andral's, in which he gives tables of a large number of cases, & my duties calling me to other subjects, I thought that my time might be more practically employed for myself by relying in the few remarks I might make, upon Andral's cases, of course much more accurate than mine could be; & thus to be content with ~~a few~~ giving a few cases only of my own.

I would merely add that the method of analysis is Andral's, made somewhat more simple by my friend Dr Frick. I regret that my ~~[illegible]~~ limited knowledge of chemistry prevented me from testing the quantities of the different inorganic constituents present.

Case 1.

1845 - 5th P.M. } Sarah Jane Chase Aet 19. an intemperate prostitute was in the house some six months since with syphilis. She says that her mother died of phthisis, & that for upwards of six months she has a constant short cough with frothy expectoration, & that during the last four months it has become very troublesome; & that during

this period she has had almost constant fever at night followed by profuse sweats. Has had no less than four attacks of haemoptysis, which she represents to have been small. She has lost much flesh, & for the last two months she has not had her catamenial discharge. Has an occasional pain in her right side. She is a dark mulatto of the average height, thick lips, body moderately fleshy. When seen to-night her condition was as follows.

Lies quietly in bed on her left side, which she says is a more comfortable position for her than lying on her right. Expectorates yellow-colored mucus with few dots of blood in it. Complains of pain in her right side when she coughs. Appetite good. Has little thirst. Skin moist & of natural temperature. Pulse 100, otherwise natural. Resp. 16 & easy. Tongue moist & somewhat furred. Phy. Signs. both clavicles more than naturally prominent, the right more so than the left. Flatness on percussion over right clavicle & marked dulness under the clavicle down the whole of the anterior surface of this side, the maximum being immediately under the

clavicle. Clearness on percussion over the corresponding portions of left lung. Resp. in left side slightly interrupted during inspiration, expiration of normal length - resonance of voice & cough of natural intensity over left antero region. In the right side in the infra-clavicular region near the humerus over a circumscribed space of a quarter of a dollar, cavernous resp, with gurgling & pectoriloquy, the pulsations of the heart heard at this part very distinctly. In the remainder of the infra-clavicular region of this side, there was heard tubular resp. expiration much prolonged into a coarse sub. crepit rale, marked exaggeration of the voice, these same sounds heard in the mammary region but less distinctly - in the infra-mammary the vesicular murmur was feeble though, the expiration prolonged when she took a full breath one or two bubbles were heard bursting - a sub. crepit rale heard in the right axilla, where there is less dulness on percussion dulness on percussion over the infra-spinous region of right side increasing in intensity as we approach the apex, at which point the expiration is prolonged somewhat

tubular with a 'softening-tubercles' click, & below this to the base there is diminished vesicular murmur. Over the posterior aspect of left lung there is prolonged expiration at the apex with an occasional click -

Diag. a small tubercular cavity under right clavicle with induration from tubercular deposite with softening to the infra-spinous region, & scattered tubercles thro' the remainder of right lung - a small deposite of tubercles at apex of left lung commencing to soften -

Analysis of her blood

Fibrin	3.980
Fatty matter	2.320
Solid Constituents of Serum	95.301
Red Globules	120.429
Water	777.980
	1000.00

Case II.

13th Ins. Stoner. Aet 40. an American, a farm of Balt. of County, of intemperate habits, has enjoyed good health with the exception of several attacks of 'intermittent fever' up to this summer, since which he has had a slight cough which has not been troublesome, & was accompanied by frothy expectoration. Has no hereditary predisposition to Phthisis

& has never suffered from ~~night fevers~~ hectic fever, & has never expectorated blood - He considered himself a perfectly sound man, except being very susceptible to cold, until three weeks ago, when while employed at a quarry exposed occasionally to slight showers, he was attacked with a chill which lasted for a couple of hours, followed by fever, & sweat, with a cough & a pain in right side low down in posterior lateral region, which he only felt when he coughed or took a full inspiration - he has in these three weeks lost some flesh he thinks. His appetite has been somewhat impaired & his thirst increased - he states that he has had but little fever, & that his rest has been but little disturbed. Bowels natural - His present condition is, as follows

Is of a stout frame with dark hair & eyes - lies on his right side. Skin of extremities pleasantly cool, that of body warm - pulse full & 54 in a minute. Resp 18 heavy. When he takes a full breath he complains of a slight pain in right side - can lie on either side without suffering any inconvenience - bowels open. Tongue moist & natural. Expression of face contracted & emplea-

-sant - a slight yellow tinge of surface. Phy. Signs. Clearness on percussion with exaggerated vesicular murmur and with an occasional sibilant rale over the whole of left lung. On the right under clavicle there is a want of elasticity on percussion, & a slightly increased tremulus communicated to the hand when he counts, but we cannot detect any increased resonance of the voice, the vesicular murmur is distinctly prolonged in the expiration & immediately next the clavicle somewhat blowing - posteriorly is some dulness on percussion over supra-spinous & infra-spinous regions with distinctly increased thrill to the hand, & in the supra-spinous near the acromion there is some faint bronchial resp., more distinct when he coughs which also ~~discovers~~ caused a shock to the ~~sh~~ ~~[illegible]~~ ear as if ~~the~~ it passed thro' a portion of lung partially indurated, scarcely amounting to bronchophony, & also a short fine crept rale - Diag. Upper lobe of right lung recovering from a sub-acute inflammation of parenchyma, to which he was predisposed by a deposite of crude tubercles -

6th He is a nurse in the Hospital - he says he has

a cough more or less constant, which is dry & short & sometimes very troublesome in the morning - expectorates but little mucus - almost nig night he has a fever succeeded by free perspiration & occasional pain in right breast - He has evidently lost flesh since our last note - his pulse is quick, full & 68 in a minute - voice somewhat hoarse - Resp - 18. Easy - Phys. Signs unaltered in front, & the same behind except the absence of the bronchial resp & crept rale - There is now no rale heard in the lung except an occasional sibilant at the top posteriorly of right lung. Analysis of blood drawn Feby 16th

Fibrin	4.20
Fatty matter	3.50
red globules	121.65
Solid constituents of serum	85.00
Water	785.65
	1000.00

Case III -

Rachel Jones Aet 52, a negress, enjoyed good health until two years ago, when she was attacked with a dry, short, troublesome cough with occasionally some pain in her breast, & fever & sweats at night, she continued at her employment (washing) until

last summer, tho' very subject on the slightest exposure to catarrhs. During the summer she had for the first time a small haemoptysis, since which she has lost much flesh & has suffered much from dyspnoea & her cough which is very painful to her - her expectoration is purulent & sinks in water in rounded white masses, without any offensive odour. She suffers more or less any night from chills, which she considers as the ague, followed by fever & sweat. Her mother died of phthisis. She is thin & much emaciated, clavicles on both sides very prominent, skin warm & dry - pulse, quick & of moderate fulness, & irritable & 96 in a minute. Resp. 48, made with some effort & audible - Her voice is hoarse & she speaks hurriedly. Tongue moist & natural, Bowels regular - has not had her menses for seven years - Phy. Signs Flatness on percussion under right clavicle for two inches, & below that the dulness becomes less until you come to within an inch of the base where the sonorousness is normal. Behind on the same side there is more or less dulness for the upper two thirds increasing in intensity as we

last summer, tho' very subject to the slightest exposure to catarrhs. during the summer she had for the first time a small haemoptysis, since which she has lost much flesh has suffered much from dyspnoea & her cough which is very painful to her - her expectoration is purulent & sinks in water in rounded white masses, without any offensive odour. She suffers now & then at night from chills, which she considers as the ague, followed by fever & sweat. Her mother died of phthisis. She is thin & much emaciated, clavicles & both sides very prominent. Skin warm & dry - pulse, quick & frequent & irritable 96 in a minute. Resp. 48, made with some effort & audible - Her voice is hoarse & she speaks hurriedly. Tongue moist & natural. Bowels regular - has not had her menses for seven years - Phy. Signs. Flatness & percussion under right clavicle for two inches, below that the dulness becomes less until you come to within an inch of the base where the sonorousness is normal. Behind on the same side there is more & less dulness for the upper two thirds increasing in intensity as you

approach the apex - Over the left side there is dulness in front for two inches down the Infra-Spinous region there is perfect dulness - under right clavicle there is loud cavernous resp. with Coarse gurgling & pectoriloquy, & nearly over the whole of the front surface of this lung there is a coarse sub. crepitant rale with tubular resp. Behind over the same lung about two inches from the Superior angle of the Scapula there is over the circumscribed space of the size of a dollar, cavernous resp. with pectoriloquy without any rale - Down the whole posterior aspect there is exaggerated resp prolonged expiration with a sub. crepitant rale. Over the Supra Spinous region of left side there is also cavernous resp. with gurgling - in front the inspiration is interrupted & abrupt with a 'click'-

Diag. Tubercular degeneration of both lungs, two cavities in right & one in left - with softening of the tubercles in both - more extensively in the right -

Blood

Fibrin - 2-40
Red Globules - 103.50
Solid Constituents 87. 30
Water - 806.80 / 1000

Case IV -

Louis Fenning Aet 19. a German by birth La Fayla, entered the Hospital Sept: 8th. He has had good health, never has a cough of any description until 4 weeks ago. Has been in this country ten weeks, all of which time he has been working at his trade in Balto. All his relations living and healthy, but his mother died with a cough - he has never had hasmoptysis; for the last ten days he has suffered from hectic fever &c - He says he has lost much flesh since the commencement of his attack, which was About 4 weeks since he was seized with a sharp lancinating pain in the right side below the mamma This still continues, being absent at intervals, & is more acute when he coughs or takes a full inspiration. He had no expectoration 'till the second week of his attack - his cough was exceedingly troublesome from the beginning. From his description his sputa was bronchitic until three days ago when it changed to its present appearance; It now consists of small irregularly rounded masses, thick & of a

yellowish green color, floating in a thin dirt-colored fluid. His cough is almost incessant, particularly at night - He worked until 8 days ago. He talks hoarsely & sometimes in a whisper & complains of pain on pressing the larynx & in talking, particularly about one inch above the sternum. Tongue nearly natural, slightly reddened - appetite excellent - bowels regular. Pulse 82, & quick - skin a little hot. He complains of feeling very weak. Resp 52 & audible. Phy. Signs - Dulness on percussion over upper fourth of right lung, with loud cavernous respiration & gurgling under right clavicle, ~~surrounded~~ for three inches below this there is bronchial resp. with a coarse sub-crept râle - cavernous resp: over a circumscribed space in right axilla with gurgling & pectoriloquy On the left side under clavicle & at supra-spinous region there is prolonged expiration & a want of elasticity on percussion & decided increased resonance of voice - Diag. Two tubercular cavities in right lung surrounded by softening tubercles, commencing lower deposits of

tubercles in the top of left lung.

Blood.

Fibrine - 4.045

These I have selected as being cases of undoubted Phthisis, so far as they go it will be seen, that the analyses agree with Andral's - Of whose results I will merely give a Synopsis & then add a few concluding Remarks.

be found, that no matter at what period of the disease the blood was examined, there appeared to be tendency to an increase of the fibrine, & a decrease of the red globules. The greatest increase of fibrine being when the tubercles were softening & small cavities forming; at the commencement, the alteration is slight, & in the last stage of marasmus the fibrine appears much decreased. The maximum of the fibrine is 5. in a thousand parts. The red globules continued to decrease - the minimum was 84. The albumen of the serum was nearly normal, varying from 70 to 80. seldom either above or below this - The inorganic constituents be found to be a little decreased being generally between 7 & 8. The

water became more & more abundant as the disease advanced varying from 790 to 845."

From these facts can we derive any practical benefit? — The two most important changes noted are the increase of fibrine & diminution of red globules as the disease advances, but we most assuredly cannot say that either of these alterations are the essential cause of the disease, as we have the same alterations of both elements even to a far greater extent, e.g. in inflammation & anaemia, without any deposition of tubercles. The fact of there being such a decrease of the red globules, which constitute the richness of the blood is certainly an argument, remembering the great effect of V.S. in diminishing the red globules, against the depletory mode of treatment pursued by the older practitioners & would direct us to invigorate the system. Observation has confirmed this treatment obtained by à priori reasoning. And this is now the practice recommended by Louis & Chomel & pursued by all scientific men. They have found that change of scene & climate has a much more

invigorating Effect than tonic medicines - tho' many men of eminence recommend, when they can with safety, the stimulating alcoholic treatment; the beneficial effects of which we have witnessed in intemperate paupers, even far gone in Phthisis - Does not the fact of the fibrin being normal or nearly normal in the first stage of Phthisis give us reason to believe that tubercles may be deposited independently of any previous inflammation - Many it not confirm Bayle, & Louis's view of the semi-transparent grey granulations, which are almost invariably found mingled among the tubercles in the first stage of this disease, viz that they are nothing more nor less than incipient tubercles, & not as Andral very ingeniously contends, vesicular inflammation, bearing in mind the great increase of fibrin in inflam: of the pulmonary parenchyma -

Carpenter states that the conversion of albumen into fibrin is an essential step in assimilation & if the vital powers of the system are too low for this, the albumen accumulates in an excessive degree & is liable to be deposited in an unorganized state forming what is

known as tubercle, a gate into the urine from the albumenuria. The latter part of this most certainly is not true, as Bright's disease is supposed to be primarily seated in the kidney itself & the increase of albumen in the urine only exciting it merely a symptom of the disease & moreover the blood in this disease is always deprived of some of its albumen, whereas in Phthisis it is generally normal & slightly increased — As tubercle is constituted principally of albumen we would suppose that any means we could use to decrease the albumen would be beneficial. Physicians do this in a degree but they also increase the fibrin — Liebig says that fibrinizing chiefly upon saccharine & gelatinous articles of food must reduce the albumen & fibrin, but this most certainly is not applicable to Consumption according to Williams's exhaustive diseases the quantity of fibrin — this we know to be beneficial.

It is a point of some importance to ascertain whether any one can create a tubercular diathesis. Andral says positively in his 'Cliniques' that if he not predis-

-posed to phthisis, all the exposure in the possible could not produce a tuberculous diathesis - Louis in the first edition of his treatise on the disease agrees with Andral, but I understand that now he is not so certain about it - But as it is a statistical fact that at least one fourth of the persons who die in this climate have more or less tubercles in some stage or other, - & as in these republican days, but few of us know who our grandfather were, we are all liable to in a greater or less degree to phthisis - not a very consoling idea certainly!

The cause of the haemoptyses which occur so frequently precede the deposition of tubercles is a point of some interest, as we know that haemorrhages are produced by only two conditions of the circulating fluid, an increase of the red globules, or plethora which constitutes active haemorrhages, or a diminution of the fibrin the cause of passive - we know that they are from pulmonary apoplexy, but what causes this flux of blood, there being no irritation there?

The cause of the oedema often amounting to

general Anaemia cannot be accounted for by
the condition of the blood, although we might
so from the great increase of the water in the
blood - but Andral lays down, from observation
of course, that the only alteration of the
blood which can cause dropsy is the diminution
of albumen in Morbus Brightii - that it must
consequently be either from pressure upon some
large vessel or must be disease of the Heart -
- he says that the oedema in Phthisis is owing
to dilatation of the right auricle of the heart, of
which we know is a natural effect of the
impediment the blood meets with in the lungs.

Why is it that mercury has such a decidedly
injurious effect in Phthisis? The use of this medicine
so unquestionably beneficial in some cases has been
most certainly carried too great an excess, & has thus
beyond a doubt sacrificed many lives Thousands
of Constitutions. Is it to be considered an anti-phlo-
gistic remedy? One fact we most certainly do
know that it absorbs the coagulable lymph, the

effect of inflammation, & this we think confirms the opinion so generally held that it prevents its deposition. As the fibrin is continually being generated, it must accumulate in the blood, & then the question ~~arises~~ arises, is there not a point beyond which the blood cannot retain the fibrin, & thus in ptyalism, it is (for what reason we know not) deposited in the salivary glands & gums, & in Phthisis, upon the principle "ubi irritatio, ibi fluxus", it is deposited in an unorganized state, i.e. tubercle, in the lungs. & may not the fact that it acts so much more quickly in tubercular than in other diseases be accounted for by the decrease of red globules, as we are well aware that mercury is absorbed into the ~~[illegible]~~ system more readily after bloodletting, which reduces also the red globules—

The few facts we have gathered, ~~[illegible]~~ ~~[illegible]~~ ~~[illegible]~~ (~~[illegible]~~), may assist us in the differential diagnosis between Phthisis & certain Pneumonias which occur sometimes at the top of the lung, ~~which being~~ (the proper seat of tubercles), even ~~with~~

with a thorough knowledge of physical signs make the diagnosis sometimes extremely difficult - in the Phthisis the fever at its maximum is only 5°, whereas in Pneumonia 6 or 7 is the medium. We may also be guided in our prognosis & treatment knowing the different stages & progress of the disease -

The remarks we have made are only a few feeble suggestions which presented themselves to our mind - A number of cases carefully analized to ascertain the proportion of all the different constituents of the blood, organic & inorganic & the results systematically arranged by practiced observers, can only be productive of benefit to the Science - For my own part I look forward to the day when the physician would as soon leave his lancet at home as his analysis-bottle, & when instead, of looking with a knowing air at the tongue as if it spoke, tho' motionless, in language, which in an instant solved all his doubts as to the malady, & directed him as an infallible guide to the treatment, he will

quietly draw a few ounces of blood & return in twelve hours prepared to act efficiently.

Now that the profession are beginning to place a proper value upon pathological anatomy may we not trust that the day is not far distant when the groundless "Doctrines" will have no foundation in truth. It appears to me that as the professors become more scientific & our knowledge more facts based upon observation & fewer theories, it must take a higher stand as a science, and the differences of opinion now existing to such a lamentable extent must necessarily diminish, & we shall have more who study for a love for the science & with the hope of being able to relieve the sufferings of their fellow-mortals - That such may be the case is the sincere prayer of one of the humblest of her votaries -

Balt. Almshouse
Feby - 1846 -

An

Inaugural Dissertation

on

Catamenia

Submitted to the Examination

of the

Provost regents & Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

by

John Steiner

of

Maryland.

A Thesis upon Catamenia.

It might be necessary before entering upon the peculiar secretion of the uterus and its diseases, to give a description of the organs of generation in their healthy condition.
The female organs of generation are divided into external and internal; those composing the external are the Mons veneris, Labia majora; Labia minora; clitoris, meatus urinarius, and the opening of the Vagina. The internal organs are contained within the pelvis, and are the vagina, uterus, ovaries and fallopian tubes. The Mons-veneris is the cushion like eminence, of integument situated upon the ossa pubis. Its cellular tissue is loaded with adipose matter, and the surface in adults is covered with hair. The Labia majora are two large longitudinal folds of integument consisting of fat and cellular tissue; they enclose the urino-sexual opening or vulva, the external surface of the labia majora is covered with hairs; the inner surface is smooth and lined by mucous membrane, which contains a number of sebaceous follicles, which keeps the vagina lubricated. The use of the labia majora is to favour the extension of the vulva during parturition. The labia minora are smaller folds situated within the larger, and assist in forming the clitoris; it possesses lubricating properties the same as the

Labia majora. The clitoris is a small elongated organ situated in front of the os pubis, and is supported by a suspensory ligament. At the upper angle of the vagina is an elevation formed by the projection of the upper wall of the canal, and analogous to the bulb of the urethra of the male; and immediately in front of this tubercle, and surrounded by it, is the opening of the urethra the meatus urinarius.

Those organs contained within the pelvis are the vagina, uterus, ovaries, and fallopian tubes. And these organs perform an office peculiar to themselves, and very important offices they are.

This description I presume will be sufficient upon the organs of generation; I will now pass on to the office they perform; and the derangements that take place, when ever the cause presents itself; if this complicated machinery is performing its periodical duty. Upon the next page I will commence the description of menstruation; and show what kind of women it effects; the time of its appearance, the changes it brings about upon the form of its subject; its continuance and symptoms Causes and cure.

The catamenial secretion is produced by the uterus of every healthy woman who does not give suck or who is not pregnant, at certain periods, from the time of puberty until the approach of old age; the periods or returns of this discharge is called Menstruation. There are several exceptions to this definition. It is said that some women never menstruate, yet conceal it and imprudently venture to marry and always prove sterile. Others menstruate while they continue to give suck, some are said to menstruate during pregnancy, but these are very rare occurrences.

Some are said to menstruate in infancy others at very old age.

Whenever this discharge makes its appearance a woman is said to be at puberty, this is the consequence but not the cause of puberty.

The early or late appearance of the menses may depend upon the climate, constitution, mode of living, or the manners of those with whom young women converse. In hot climates such as Greece, girls begin to menstruate at eight, nine, and ten years of age; but advancing to the colder climates

The quantity of blood discharged at each evacuation depends upon the climate, constitution, and manner of living, but it varies in different women in the same climate, or in the same women at different periods.

indicate the change that is about to take place. These are more disturbing at the first than in the succeeding periods, and they are similar to those produced by uterine irritation from other causes; as pains in the back and inferior extremities, complaints of the stomach and viscera, with various hysteric and nervous affections, often preceded by the discharge of a colourless mucous from the vagina. These symptoms designate the commencement of menstruation; and continues till the proper discharge comes in, when they abate or disappear; returning however with considerable violence in some women at different periods.

Yet there is a common quantity to which women approach under these circumstances; for in Greece the quantity might be about eighteen ounces and in Lapland about two ounces, and in this country the medium of those two extremes, would be the quantity evacuated; which would be about six or eight ounces. There is a great difference in the time required for the completion of each period of menstruation. In some women the discharge returns to a day or an hour, and in others there is a variation of several days, without any inconvenience.

In some it is finished in a few hours, and in others, it continues from one to ten days: but the most usual time from the commencement to the termination is from three to six days. It is the opinion of some that the menstrual fluid gives out an offensive odour; but there is no reason for thinking so for the menstruous women exists in society as at all others times, and the menstrual discharge is found to be of an inoffensive nature.

When women approach old age they cease to menstruate; but the cessation depends upon the early or late appearance of the menses. Those who commence early to menstruate as in Greece at eight and nine the discharge will sometimes cease before they arrive at thirty-six. But in this country the most frequent time of the cessation of the menses is between the fourty-fourth and forty eight year, after which women never bear children.

Causes of Menstruation.

The causes of menstruation are divided into Efficient and Final.

The efficient cause. There has been much

time spent to find out the cause of menstruation. But all the time that has been spent it is mere speculation or guess; it has been attributed to general and local plethora to lunar influence &c. The cause of menstruation in my opinion is still locked up in the bosom of nature and will ever remain so.

Final Cause. The final cause acts whenever nature wishes to dispense with procreation or when the strength of the female is disabled by age to bear children then the final cause withholds the menses which is necessary for the nourishment of the fœtus.

Disorders of Menstruation.

These functional derangements are divided into three classes.

First.— Amenorrhea; Second.— Dysmenorrhea

Third.— Menorrhagia.

Amenorrhea.

This is a suppression of the menses, and is one of the most common forms of menstrual disease, though sometimes born without any inconvenience;

but it seldom fail ultimately to derange the the general health, and unless remedied often leads to the most distressing and dangerous consequencies

The Exciting Causes.-

The exciting causes of amenorhea are exceedingly various. Every thing which is capable of deranging the general health has a tendency to excite irregularities or suppression of the catamenial discharge. Organic and inflammatory viceral affections - more especially pulmonary consumption, Chronic hepatitis, and gastro-intestinal phlogosis or irritation, are rarely unaccompanied by menstrual irregularities, and often by a total and obstinate suppression of this evacuation. Mental emotions, particularly protracted grief and despondency, and sudden terror or violent anger have a powerful tendency to arrest the catamenial discharge. Metastasis of rheumatism, of erisipelas, and of chronic cutaneous affections, habitual hemorrhoidal discharges, as well as the horrid of hemorrhages, leucorrhea, and deficient and unwholsome nourishment, may also give rise to this affection.

But by far the most common cause of amenorhea is <u>cold</u>, operating on the System either during the interval of the menstrual periods or immediately

before the menses are about to appear, or finally during the actual flow of the evacuation

Symptoms.

The usual symptoms which ultimately arise from this affection are lagour and debility, a pale and sickly expression of the countenance; swelling of the ancles; various nervous affections, such as paroxysms of palpitation of the heart, and dyspnoea; flatulent and spasmodic pains in the bowels, loss of appetite, and in relaxed and leucophlegmatic habits leucorrhea. In subjects predisposed to Phthisis Pulmonalis, or any other local or general disease a suppression of the catamenial evacuation is always particularly dangerous, from its tendency to develop such affections. When the menses are suddenly suppressed, whilst they are flowing; or when the remote cause of the obstruction is applied immediately before the impending appearance of the evacuation; the consequences are much more violent and sudden. In such cases the most alarming symptoms come on almost immediately after the suppression of the discharge. Such as paroxysms of violent spasmodic pains in the stomach and bowels attended occasionally with severe retching.

In other instances strong determinations of blood to the head giving rise to raving delirium, hysteric mania, convulsions, and a temporary loss of sensation and voluntary motion. Sometimes alarming palpitations of the heart take place, with great difficulty of breathing, and in some cases the irritation passes at once upon the sanguineous system occasioning high febrile reaction, and local inflammatory affections.

Treatment.

When any of the violent affections just mentioned succeed the sudden suppression of the menses, the first object must be to allay the alarming and painful symptoms, without any immediate attention to the restoration of the evacuation. For if we even attempt, indeed to reinstate the catamenial secretions at the period when it becomes arrested, it almost always proves abortive; yet the remedies that are proper to palliate or remove the present symptoms, will generally bring back the suppressed evacuation. In those subjects who are young and plethoric, or where strong determination of blood take place to the head or lungs, efficient venesection should be promptly resorted to. This remedy

will seldom allay the violent spasmodic and painful symptoms, alone; but in the habits just mentioned it constitutes an essential preliminary to the successful employment of other remedies, particularly opium and ether, which in most instances afford more speedy relief than any other remedies we possess. Active cathartics and purgative enemata, sinapisms to the lower extremities, warm pediluvium, and antispasmodics, are the principle means to be relied on. In weak and nervous females, it will be unnecessary, and often improper to bleed. In cases of this kind warm pediluvium, with a few full doses of Laudanum and Camphor, will in general speedily allay the allarming and painful symptoms which often accompany this accident.
Dr. Dewees states, that he has found nothing to answer so well where the pain in the stomach or lower part of the abdomen is severe, "as an injection composed of a gill of thin starch a tea spoon-full of Laudanum, and thirty grains of finely powdered camphor; and if it be complicated with hysteria, the addition of three teaspoon-fulls of the tincture of assafetida, instead of the camphor may be useful. Injections of Laudanum

has been known to give complete relief; but where the stomach will retain the medicine it will act more promptly when administered by the mouth. The benefit, however resulting from this narcotic in ordinary doses is little or none. From two to three grains of opium, with ten or fifteen grains of camphor, should be given at once. It should be recollected particularly, that where the tendency to cephalic conjestion is strong, or in full, young and vigorous, subjects, an efficient abstraction of blood must be premised to the used of these remedies.

Sometimes the secale cornutum allayed completly all the symptoms attending a sudden suppression of the menses. Amenorrhea in young subjects is at first almost invariably accompanied by a manifest phlogistic habit of body. In instances of this kind moderate abstraction of blood, aided by a symple and unirritating diet laxitives, and regular exercise in the open air, are all important remediate measures. Where the disease has developed local inflammation, or sustains irregular determinations to internal organs, especial means should be used, in conjunction with the general remedies just mentioned, to counteract the local

affection, before any direct attempt is made to excite the uterine reflexes. Blisters, rubifacients, the warm bath, antimonials, &c may all be beneficially employed under circumstances of this kind. When the suppression occurs in relaxed and debilitated females with a small, feeble, and languid pulse, the first object should be to invigorate the general system, and to improve the digestive and alvine functions. Iron, mild tonics, a simple but nourishing diet, exercise by gestation, and gentle alactic aperients are especially indicated in such cases. Where langour and debility attend the black sulphuret of iron in union with small portions of ipecacuanha will be found advantageous Five grains of the former with one of the latter, may be given three times a day. It is proper to observe, however, that even in cases attended with much langour and weakness, mild apperients are sometimes important remedies preliminary to the employment of tonics; for it is not uncommon to find the bowels exceedingly loaded in such cases and there can be but little advantage derived from invigorating measures so long as this condition of the intestinal canal continues. Sometimes cases that

that come on slowly and apparently without any cause directly exciting, will be found on close examination, to be connected with chronic irritation, or phlogosis of the mucous membrane of the bowels, from a remove of fecal matter in the bowels, or from the habitual use of a superabundance of coarse, irritating or indigestable aliment. By pursuing a general or regular course of treatment adapted to the particular circumstances of the case, we may often restore the menstrual evacuation; and should we even fail in effecting this purpose we shall nevertheless gain some advantage, by placing the system in a favourable condition to the operation of the remedies more directly calculated to act upon the uterine system.

Dysmenorrhea

Painfull and imperfect Menstruation. This disease is a common, and generally an extremely harrassing affliction. Females are liable to this disease at every period of life during their menstruating stage; but it appears to be most common between the twenty eth and thirtieth years of age, and in

subjects of an irritable and sanguineous temperament. In many cases, severe pains are experienced in the back, loins and lower part of the abdomen, for five or six hours previous to the appearance of the Menstruous evacuation. These pains however soon cease, and an immediate aggravation of the torturing pain follows. The Catamenia sometimes begin to flow moderately with little or no previous pains; but in an hour or two it becomes suddenly arrested, at the same time violent pains come on in the hips, hypogastrium, loins, back, and thighs, with a distressing sensation of forcing or bearing down in the pelvis. Some patients are much harrassed by severe headach or nausea, and paroxysms of violent retching and vomiting, during the first five hours of the complaint. These pains continue, for a period, varying from two or three hours to several days, terminating commonly in the discharge of a pseudomembranous substance from the vagina smaller in appearance than the decidua.

Females labouring under painful Menstruation generally experience two kinds of pain; Namely: the intermitting expulsive pains, resembling those of labour or

abortion; and the constant menstrual pains in the back, pelvis, loins and thighs, which occur often in regular menstruation, shortly before the appearance of the evacuation. There are two distinct states of this affection, which in a prognostic point of view are worthy of attention. For in some cases the Mamma sympathizes strongly with the uterus - becoming turnid, and often very painful to the touch; whilst in other cases the breast remain wholly free from any affection of this kind. The former variety of cases, are much more manageable than the latter, an observation which is believed to be well founded; however inexplicable it may be. It is supposed by some writers that the formation of a pseudo-membraneous substance upon the internal surface of the uterus is always present in this affection, and constitutes, in all instances, the immediate cause of the difficult and painful menstruation. This however does appear to be founded on incorrect observation. For females have been known to suffer very painful and incomplete menstruation for two, three or four periods in succession, and after wards menstruate regularly without any particular difficulty, where no membraneous matter

whatever was at any time discharged. Painful menstruation is not universally attended with a scanty flow of the catamenial fluid. Cases are on record, where, in point, quantity, and duration, there was nothing irregular in the menstruation, but where, notwithstanding, extreme suffering attended each menstrual period. This can reasonably be presumed, could not take place, if the internal surface of the womb were coated with false membranous matter.

Dysmenorhea may depend frequently on a rheumatic affection of the uterus, or it may depend on a nearly impervious state of the os uteri.

Treatment.

The treatment of dysmenorrhea is divided into palliative and radical; the former to allay the extreme suffering during the presence of the affection; and the latter to prevent the recurrence, by means employed during the interval of the attack. All the emmenagogue remedies, or such as are calculated to determine the circulation to the pelvic organs, are always highly improper. Camphor is considered in large doses as decidedly the best palliative remedy we possess in this painful affection.

administered in the dose of ten or fifteen grains every hour, until the pains are in a great degree allayed; and when the stomach will not bear it, it is advised to be given in the form of an enema. It has been as a remedy in some cases with much benefit but if prescribed in union with dovers powder, in the proportion of six to eight grains of the former to four of the latter every hour it answers a better purpose by inducing perspiration. For if we can early induce a general perspiration, the painful symptoms almost always speedily decline. To promote this intention, it will be proper to confine the patient to bed, and to direct the use of warm, diaphoretic diluents - particularly elder blossoms, or eupatorium perfoliatum tea. Opium given in full doses, with small portions of ipecacuanha, so as to excite nausea, but not vomiting, is perhaps, upon the whole, the best palliative, when the patient is capable of taking this narcotic without the disagreeable effects which, in some, both it & it is apt to produce. It may be advantageously given in combination with camphor in ~~doses~~ proportion of a grain of the former to eight of the latter, every hour until the symptoms are mitigated.

The warm bath will occasionally afford considerable relief in dysmenorrhea, more especially when it is used in conjunction with camphor and opium. Bleeding is often decidedly indicated, and although it does not appear to be capable of exerting any direct influence over the symptoms, it is an important auxiliary, or preliminary measure, where the pulse indicates its use to the employment of the means already mentioned.

Radical Treatment.

In instituting a treatment for the radical cure of dysmenorrhea particular attention must be in the first place paid to the general state of the system. In plethoric and phlogistic habits, a mild ~~vege~~table diet must be enjoined, and it is especially important to attend to the state of the digestive and intestinal functions. When there are signs of a loaded and torpid state of the bowels, it will be highly important to adopt a correct course of mild aperient treatment, before recourse is had to remedies more immediately directed to the uterine system. An occasional dose of blue pill in the evening, with a gentle purgative on the following morning, should be used, until the

bowels are put in a healthy condition. The occasional employment of an ipecacuanha emetic; is said will sometimes afford very considerable advantages in this affection. When the diathesis is manifestly phlogistic, and the pulse tense or active during the intervals of the attacks, small abstractions of blood, and even antimonials in conjunction with a vegetable diet and aperients, are obvious by proper. When the desease is accompanied with a rheumatic or arthritic diathesis, the warm bath, gentle diaphoretics, particularly decoctions of Lignum guaiacum, and small doses of the flowers of sulphur, will often be found useful. Among the various remedies that have been recommended as particularly calculated to prevent the recurrence of the affection; the tincture of guiacum is at present most generally relied on by practitioners. Dr. Dewey, who introduced this article to the notice of the profession as a remedy in dysmenorrhea regards it as incomparably the most efficient means we possess for counteracting this affection. It should be given in as large dose as the stomach will bear, and its use persisted in for three or four months, and even longer, if its good effects are not previously obtained. Dr Dewey, observes

that it is not uncommon to find the first return of the menstrual period, after commencing the use of this remedy, attended with unusually severe symptoms; and he considers this as a favourable symptom. The extract of Stramonium has most frequently succeeded in affecting a cure. The mode of employing it is to give the one eight of a grain of the extract three Times daily, commencing about four days before the expected return of the attack. Immediately previous to commencing with its use, the bowels should be free by opened by a purgative and the patient ought to abstain from all kinds of stimulating food and drink. The decoction of the polygala Senega has been recommended as a means for curing this affection. An instance has been known where a Salivation, accidently caused by a Mercurial purge removed the complaint effectually.

Menorrhagia.

This disease of Menstruation may be defined to be an increase or profuse Menstrual discharge; and when this occurrance takes place the Term of menorrhagia is given to it. But some writers have and I suppose with plausibility divided it into

profuse menstruation and Menorrhagia; intending the first to be an increase of the customary discharge, and by the second a hemorrhage analogous to that which may occur in any other part of the system. Now if the return of the discharge makes it appearance at the usual period then the disease is called merely an excess of menstruation, but when it recurs more frequently it is named Menorrhagia. But it is undoubtedly a difficult matter to discriminate, between an excess of the uterine functions, and actual hemorrhage. If this discharge has been allowed to run on in this way for a considerable time, the body suffers from the drain on the sanguinious system. The face will become bleached for the want of the natural quantity of blood, the patient experiences nervous headaches, vertigo, tinging in the ears, drowsiness; the hands and feet are cold, the body chilly, and the pulse as a natural consequence, will be small and languid. These head symptoms are owing to a deficient flow of blood to the brain, and is parallel to that disease which arises from too abundant a supply of this fluid. With regard to the peculiar predisposition of females to Menorrhagia, there are two classes. The first are those of a robust and plethoric habit. The second of a contrary habit; debility,

The symptoms of the first class are of an inflamatory character. they are fixed pain, weight, sense of fulness, and tenderness in the region of the uterus, combined with a full hard febrile pulse and a hot skin. The desease that is characterized by these symptoms is called inflammatory Menorrhagia. The symptoms of the second. In this desease there is no pain in the region of the uterus; but the countenance is bleached, circulation languid; and a small weak pulse; This is the Menorrhagia from debility. Now I have described the character of the desease generally and the symptoms of the two varieties, and the remaining part is the treatment.

Treatment of Menorrhagia.

This treatment will be comprehensible in a general manner and it will be given in such a manner. The first thing that I should notice is the diet. it should be nutricious, but not Stimulating; relief should be given to the bowels by gentle laxtives; tonics, should be given to support the general system. They are local means that we resort to; such as cold water and astringent injections; but cold water is the most efficatious. In the administration of an enema of cold water, it must not be propelled with great violence; for the intestine does not like to be assaulted in this manner; and will reject it immediately.

An Inaugural Address

on

Continued Fever

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by

William F. Peabody

In selecting ~~the subject of~~ Continued Fever as the subject of my Thesis, I have been influenced rather by the belief that I know more of its characteristics, than of most other diseases than by any notion that I can do any thing like justice to such a subject—

You must be aware that the length of time prescribed for medical study is not sufficient to make profound theorists, and the practical knowledge is more limited than the theoretical—

In the full conviction that my production will be judged by those as ready to assume the mantle of charity as to wield the sword of justice, I proceed to the discussion of the theme I have selected—

Continued Fever is a disease assuming so many and various characters, as to render it by no means easy to define precisely and intelligibly that affection or variety of affections which help at various times to constitute it—

I find one definition as good, perhaps better than any other that I have seen

given in the following words – "It is a disease which after a precursory stage of languor, weakness and defective appetite, acceleration of the pulse takes place with increased heat great debility of the limbs and disturbance of most of the functions without primary local disorder and without well marked remissions" The above may be termed a definition and yet none of the characteristics save that ~~of~~ termed 'general disturbance' are always present – In order to obtain as comprehensive a view of the symptoms of continued fever as possible, it has been arranged into three varieties and then certain phenomena which may or may not be present in either of these varieties – The first division ~~of the~~ Synocha ~~which~~ I find explained in the following words, and I take the precise words, as it seems to me it would appear like affectation were I to use my own language when I could do so only by cunningly distorting that which I find another has said in these words – "Synocha is a fever consisting of a state of chilliness or rigor succeeded by a great increase of heat, frequent hard pulse, redness of the urine, little disturbance of the mental faculties, and tending in general to terminate by sweating – It is generally abrupt in its onset, the patient experiencing a feeling of languor and weakness, a sense of fatigue, as if worn out by some

extraordinary exertion, followed, or accompanied by headache, and some genual feeling of pain in the back, ~~and~~ limbs and head, a frequent, *fully pulse with occasional slight chilliness and shivering, which are soon superceded by a hard pulse, sometimes full often small, but generally rapid, even to 140 and even up to 160; a dry tongue, coated with a white fur, the skin dry, hot, parched, and pungent the animal temperature is from One Hundred to One Hundred and Ten — The symptoms above mentioned, save the cold state; continue and increase, vertigo, headache, pain in the limbs, great thirst without any desire for food — The urine is scanty and high colored, with constipation of the bowels — The senses become painfully acute, there is great intolerance of light and exquisite sensibility of hearing, especially the stated repetition of any one sound. Some slight ~~exacerbation~~ exacerbation is generally observed towards evening, and a corresponding remission towards morning — The above skeleton of symptoms may be developed in an hour, or they may take up two, or even three days in their course of development — The mind is generally clear for several days, and is not necessarily affected at all, though it is perhaps oftener than otherwise clouded, and sometimes delirium of an active character takes place —

Vomiting is also sometimes present, but not necessarily so at any stage of the disease— Epistaxis is a frequent accompaniment sometimes to a troublesome extent— This fever is terminated usually in one of three ways. First, abrupt departure in connection with some critical discharge— Profuse sweating, diarhea, or epistaxis, are common forms of this method of removal of the fever— The second termination is accomplished by a gradual amelioration of all the symptoms, without any critical discharge, save at times a tolerably profuse sweat— The third variety of termination, is the gradual sinking of the patient into the typhoid state— It frequently happens that a patient with a pulse at one hundred and forty, after a profuse sweat, lasting from one to five hours, is relieved from all the symptoms, and is in a state of repose, save that he is of course weak and exhausted— The above is a sketch of inflamatory fever in its pure state, as it is generally found— especially in young adults— It is not however to be inferred, that it is frequently so found, divested of any local complications— The more general local complications, are catarrh pneumonia, and pleurisy; but they do not as a general rule show themselves earlier

than the third or fourth day— It has been remarked, that these local complications are more frequent among the lower classes. With these remarks I pass to the consideration of the second form of continued fever— termed Synochus— This is the more common form of continued fever— It is much the same as Synocha in its commencement, and in its termination tends to, or is lost in the typhoid form — It seems to me to be not much else than the gradual, or quick (as the case may be) retrocession from Synocha and introduction to Typhus— This change takes place usually in the course of the second week, and is indicated by the pulse becoming fuller, more compressible, and less frequent, though it does not generally lose its characteristic jarring— The tongue becomes dry and brown in the centre, and the muscular exhaustion is greatly increased. The nerves lose their irritability and become more obtuse than is natural, there is also a strong tendency to sleep or a state resembling sleep. The integuments lose their bright red flush, and take on a dingy or brown color. Frequently there is a tendency to delirium of a low muttering character, and thus the patient is gradually introduced to the true Typhus in its characteristic form— The symptoms

of true Typhus are as has been before remarked, blended in their commencement at least, with those of Synochus - I quote the definition of the term Typhus - It is a fever characterised by a compressible, rather frequent pulse, little increase of the animal temperature, extreme languor and debility, and much disturbance of the mental functions - Perhaps the most marked distinctive characteristics of Typhus, are the great exhaustion of muscular power, and the torpor, or derangement of the mental faculties - It is I presume this last characteristic, which gives it its name, meaning literally stupor - I have said that Synocha generally commences abruptly, and Synochus in as far as it possesses the inflamatory stage as a characteristic, is also sudden in its onset, while Typhus on the other hand, and those cases of Synochus which have not the inflamatory stage well developed, is gradual in its onset - The above remark holds good as a general rule - There are however some exceptions: In particular epidemics the enumeration of the symptoms will serve to show the relation it bears to inflamatory fever, and will also develope the distinctive characteristic of the typhoid state - They are the following - Languor, headache, sleeplessness loss of appetite, and dislike to mental or

or physical action of any kind - The above mentioned sensations are of a slight, and sometimes apparently trivial character at first, but though slight, they are not to be shaken off, on the contrary, they gradually increase in severity until the patient finds that insignificant as he deemed his foe, and cavalierly as he has treated him, he is destined to bow before his growing might and instead of conquering, is pleased and happy if he can make any terms with him for his life - But to return to the discussion of distenct symptoms - In from one to six or seven days, the patient is attacked with a rigor, the pulse is frequent, ranging from ninety to one hundred and twenty - These are the extremes, and it should be observed that the pulse is sometimes not above seventy, and occasionally is below the healthy standard even - The tongue is white with a florid tip, entire lop of appetite, most annoying thirst, accompanying great and increasing debility, the breathing quick and particularly distressing ~~the~~ to see, though the sufferer does not single it out as a subject of complaint - The skin is rather above the natural heat, but is not a strongly marked symptom - There is frequently constipation of the bowels, high color of urine, and a deposite of sediment when cool - The breath

is peculiar, and sometimes there are frequent fits of tolerably profuse sweating, though without in any perceptible degree serving to abate the fever - The eyes and ~~head~~ face present a heavy injected appearance, and the whole expression is so characteristic as to enable an experienced physician to determine at once and with very tolerable certainty, the character of the disease - Deafness is also not a very uncommon symptom; sickness and vomiting are sometimes present, though not, I am inclined to think, in a majority of cases - These symptoms continue for some ten days or two weeks, gradually increasing in intensity when the tongue frequently becomes brown or black, dry, chapped, and peculiarly harsh or rough to the touch - Sordes are found on the teeth and lips - I should have said that the tongue is retracted, ~~and~~ not frequently, The pulse is soft and jarring, easily compressible and is usually about one hundred and ten - The skin continues dry & hard but not particularly hot - The evacuations are of a dark color and fetid smell - The heat of the surface, though not great, is unequally distributed - For example, the extremities frequently become cold, at least in a measure, the patient complains of little, save weakness

and want of sleep - If sickness and vomiting have been present they disappear - The muscular debility and sense of exhaustion is sometimes excessive, accompanied with a tendency to fainting, and in a few cases the fever is brought to an abrupt termination, by fatal Syncope towards the close of the second week, brought on by some imprudent attempt to sit up, or to get up to stool - As the disease progresses, the prostration as before mentioned becomes excessive, the tongue becomes dryer, darker and retracted - A tremor of the hands and starting of the tendons at the wrists, a deepening of the stupor, and less interruption ~~from~~ delirium accompany this stage - Sometimes also foecal discharges and retention of the urine with great distention ~~disturbance~~ of the bladder are found - When death is about to supervene, there is increased frequency of pulse, hurried and painful breathing hyprocratic expression of countenance, much injection of the conjunctivae subsultus of the tendons, twitching of the muscles of the face, singultus, and deep coma - When on the contrary recovery is about to supervene all these symptoms abate, the coma is interrupted by natural sleep, the tongue becomes moist, the pulse less frequent, and then is seen soon after some slight return of appetite

of appetite and an appearance of more consciousness. These changes are followed by genral improvement, but the recovery is in general slow. The blood in Typhus is not florid as in Synocha, but very dark and sluggish, coagulates slowly, and it manifests no buffy coat. This change is more marked as the disease advances, and the chemical properties of the blood are of course changed entirely — I find some state that the salts and haematosen are often reduced to two thirds of the healthy proportion — It is I believe the opinion of the profession that the doctrine of critical days is a correct doctrine. In fatal cases death comes to the relief of the ~~patient~~ sufferer generally between the eleventh and seventeenth day — It is sometimes protracted beyond that length of time, by the intervention of some secondary disease — The critical days are the third, fifth seventh ninth &c. and the non critical are the intervening days — With the foregoing sketch of continued fever, I pass to the consideration of the secondary affections frequently found, which modify and vary in a marked degree the numerous test of symptoms I have spoken of — It is I believe held to be a rare occurrence, for either the inflamatory or typhus fever to run through its course and not become complicated with some one or

more of the secondary affections, to which the general disease is incident— Although there are cases enough of pure fever, to establish the opinion that fever is itself a primary disease, and not a consequence of some local disorder— It is inferred that the local disorder arises from the disturbance occasioned by the fever because it is not usually seen until the fever has been present for several days, because of the great variety of these affections as to place and character, and because they appear and disappear, without the course of the fever being materially aggravated or allayed in its essential symptoms— They depend probably on an infirmity or weakness of the organ or organs invaded, or because the individual has been exposed to the usual exciting cause of the special affection—

The pathological state which induces them is thought to be congestion of the part or parts attacked, and this it may be remarked is probably the condition of most of the internal organs in a greater or less degree—

I will endeavor to enumerate several of the more prominent seats of inflamation, and under each of these heads, several of the most frequent affections of incident to that organ or set of organs— The affections referable

to the head, are chiefly congestion of the substance of the brain or its membranes meningitis and a convulsive affection allied to epilepsy. It cannot be doubted that fever is a disease in and of itself, and yet congestion of the contents of the head is an almost invariable accompaniment of it, so much so as warrant the opinion that it is one of the ordinarily invariable results or concomitants of fever — It presents when severe all the more aggravated symptoms of fever. I mention the affections of the throat next in order as I find them enumerated cynanche tonsilaris, aphthous ulcerations of the throat and mouth cynanche laryngea and cynanche parotidea — These affections are frequently troublesome but are not often the source in themselves of much danger. They are frequently relieved in the course of the fever — The affections of the chest next claim our attention — These, next to affections of the head are the most serious and common of all local affections — The principal diseases of the chest here, are Catarrh indicated by a dry cough gradually growing clear as the mucus sputa increases — This affection generally appears early in the disease — Pneumonia and Pleurisy are rather rare local affections than otherwise in the course of fever. They

appear more frequently towards the close of the fever, and then even often the fever has passed off they run through their distinct course. Sometimes it happens that when the above affections are present the patient owing to the cerebral affections under which he is labaring is not aware of the complications, and here the physician must depend upon the physical signs rather than the opinion of his patient. The secondary abdominal affections are subjects of great interest, both, on account of their great frequency and also as a basis for the theory of nonesentialism. The most important affections of the abdomen are an obscure affection of the Stomach dependant on irritation and inflamation and resembling Gastritis swelling and ulceration of the mucoparous glands of the intestines and derangement of the hepatic organs, attended with the external symptoms of jaundice. Enteritis is no doubt sometimes present as a secondary local affection. In France a severe affection of this sort running on to inflamation, suppuration and ulceration of the solitary and conglomerate glands of the intestines is deemed by many the true cause of fever as it is seen very generally to accompany it. It seems to me in respect to these affections of the abdomen a marked difference exists

between the English Typhus, and the Continental fever, especially the fever known in France and examined by Louis so frequently —
Much more might be said of the abdominal affections but as I have neither time to spare nor a sufficiently critical knowledge of the varied grounds of the scarcely less varied opinions, I must leave it for future study, thought, and practical investigation —
The affections of the skin are important both on account of the danger attending some of them, and also because they materially assist the physician in forming his prognosis —
The more important of these affections both as to frequency and danger, are petechiae of one or another sort = Vibices sometimes show themselves in the latter stages of this fever, and are no doubt allied to ~~the~~ petechiae ~~hæmatoma~~ in their nature — If the patient escape the exhaustion they indicate, they are liable to lead to gangrene in those parts subjected to pressure — Gangrene and sloughing are however more frequently preceded by erythema than by vibices —
Erysipelas is in some epidemics a rather common complication and is always an exceedingly troublesome complication — It occurs frequently when idiopathic erysipelas is prevalent especially when

it is epidemic in hospitals - The next and last eruption I shall mention is miliara They are common on the neck, breast, and shoulders Sometimes they break out soon after a profuse and critical sweat, and then they constitute Sudamina They are a favorable indication rather than the reverse - Let us pass now to the consideration of the sequale of fever - They are on the whole deemed more as independent consequences of the fever - When serious sequale present themselves they are generally dependent on marked infirmity of constitution before the attack of fever, or an exposure during early convalescence or carelessness in regimen - Age is also held to be an exciting cause, the affections occurring or said to occur, are a relapse rheumatism neuralgia, partial palsy oedema and phlegmasia dolens peritonitis pleurisy ~~and phthisis~~ phtisis pulmonalis and Much might be said of these various affections as sequale but lest I extend this article to too great length, I will content myself with having merely enumerated them and will pass directly to the consideration of the anatomical characters of the fever. Until recently no very definite ideas were prevalent on this subject, but of late much, and persevering study has been given to it - Perhaps the only morbid appearance

invariably present, is congestion of the ~~vascular~~ internal organs - The various other lesions found are of practical importance, inasmuch as they show to the physician the necessity of paying strict attention to the secondary affections on which these lesions depend - As a condition of the brain dependent on the primary fever I may mention congestion of the brain and its membranes The blood vessels are gorged, the bronchial membrane of the lungs and the intestines are dark and vascular, the mucus membrane of the bladder is also similarly affected -

It should be ~~remarked~~ remarked before leaving this part of the subject that all the phenomena now mentioned, come under the denomination of pseudo morbid appearances and may be occasioned by the manner of death - The parts in which morbid appearances are frequent, perhaps most frequent is the mucus membrane of the alimentary canal - The pharynx is sometems ulcerated, as is also the gullet - The stomach is sometimes enlarged - Softening and attenuation of the villous coat was frequently found by Louis - The mucus membrane of the duodenum is at times red, softened, and even ulcerated; the small intestines are distended with gas, and contain much mucus, sometimes bloody, sometimes bilious - The Colon is in much the same condition as

the smallen intestines — The serous membrane on the athen hand seldom presents distinct signs of disease — The glandular systeno is more or less affected, usually the Spleen is found softened and enlarged —
The liven is occasionally enlarged, and the kidneys are at times softer and of a darker color than usual — The lungs are sometimes affected, though more frequently in a healthy state — The heart is frequently of a dark brown color, and softened, sometimes so much so as to be easily torn — This condition of the heart would give through life a hurried, feeble, and fluttering pulse — The above mentioned secondary morbid appearances are, I believe the principle and more common lesions —
I may not have mentioned all and I have dwelt but little on any of them —
The causes of Continued fever next demand our attention. and as much doubt still exists in the minds of many able men on this subject, I shall pass rapidly on to prognosis and treatment. The infectiousness of fever as a cause is very generally admitted, at least in the United States, and perhaps it is equally the sense of the profession, that Continued fever is not contagious — The arguments in proof of its infectiousness are without limit, among them the following facts may I trust

be deemed insufficient — When it becomes epidemic in cities of some considerable magnitude, it develops itself gradually, and is seen to emanate from the first cases as a centre It does not, like miasmatic fevers, burst forth at once and with violence — Those most exposed are those as a general rule, who will nurse it, as the immediate friends, the family, nurses, physician &c. &c. — ~~The disease~~ It is seen sometimes to arise in a healthy district, brought there by one laboring under the disease — It is not easy to determine the laws by which it is governed. It is probably communicable to all — Cleanliness and ventilation are powerful preventatives, and on the other hand a lack of these is a powerful promoter of the infection — An attack of fever is in some degree a protection against it — It has been said to be a complete defence, but facts (those stubborn things which spoil so many theories) will not sustain this opinion — It is generally by long and continued exposure that the disease is taken — Seldom if ever by any single exposure, and it is held to be probable that the severity of the attack bears some proportion to the amount of exposure — It seems probable that fever is more readily experienced by those whose constitutions are poor, or who

have been exposed to cold, fatigue, or even sensual excesses — Strong mental emotion are also a cause — I have thus (as I am aware) in an exceedingly cursory manner, glanced at the causes, and the laws which regulate those causes, and will now take up for consideration the prognosis — In prognosis of Continued fever a vast number of facts and circumstances are to be taken into the account and of course a degree of uncertainty must exist in the first stage of the disease under any circumstances, but in certain cases so much is this uncertainty increased that a prudent man would, I should imagine forbear to give any decided opinion as to the probable result — The type the character of the epidemic the local complications already present, or that may present themselves, all tend to cast around the final issue a more than barbaric obscurity, amid which but little can be said with wisdom, of the future — The present alone is to be spoken of or considered, and here the physician will no doubt find ample scope for all his care, knowledge and prudence — During the early part of the first week it is not proper in many cases to give a prognosis — The symptoms and degree of severity are then deceptive — Those cases which now seem the mildest ~~then~~ may become the worst, and vice versa the symptoms which in the latter part of the

first week would tend towards death, are great frequency. softening, and jarring of the pulse. or worse still, the weak fluttering and irregular pulse, a dry, brown, and retracted tongue, irregular temperature, diffuse or irregular sweats, headache when united with great flushing of the face with injection of the sclerotics, excessive prostration of strength shown by the patient laying on his back, and ~~Delerium of Coma~~ a sinking or sliding down in the bed - Delirium of every kind is at this stage unfavorable, but especially high or muttering or pleasing delirium - Subsultus of the tendons, a tremor of the hands, sighing respiration, are all at this stage unfavorable and demand an unfavorable prognosis. It is held to be a general rule that in Typhus, when in the course of the second week the pulse attains one hundred and forty the prognosis is almost desperate. Still, recoveries have been known with even a higher pulse —

To enumerate all the symptoms of all the stages, both of a favorable and an unfavorable character, would take by far too much of my time, and I will therefore leave the subject of prognosis unfinished as it is, and pass on to speak of the treatment —

Few diseases are now better understood than continued fever - But notwithstanding this, the methods of treatment are as various almost as the practitioners who treat it - One relies on general, another on local blood letting, one gives diaphoretics and sudorifics, another gives cathartics - This man says that mercury is the sole specific, that man calls for the soothing power of opium, another yet starts up and calls for wine, and yet another arises and lo! in his hand a huge flagon of water, on which in the form of cold affusions he depends - The more consolatory view of this heterogenous remedies is, that in the first place there are several good ways of treating the same fever, and in the second place that a material difference in the treatment is rendered necessary by differences in the epidemic character of the disease - In no respect is this difference of epidemic character

the much lauded means of arresting fever

of epidemic character more important than in the treatment— In determining on the treatment in a particular case, it should be borne in mind that there are two opposite conditions of the system which are to be combatted— That these states always coexist cannot be questioned— It is equally certain that their relative force varies greatly in different cases, and in different epidemics, as well as in different stages of the same case or epidemic— From the above it may be inferred that the treatment must be complex, and often seemingly contradictory— I shall pursue the plan of considering the treatment proper for the different stages of the disease—

In the commencement, the object of treatment is to cut short the disease— in the early stage to mitigate reaction— in the middle stage to mitigate reaction and support exhaustion— in the final stage to support exhaustion and maintain life till the fever wears itself out— in convalescence to restore strength and prevent relapse— Much has been said and written of the means and the practicability of cutting short continued fever— I have been taught however to suppose that it is impracticable— An emetic of ipecacuhana and tartarized antimony, and general blood letting are two of the much lauded means of arresting fever

in its incipient stage — They are both good in some cases, but for a different purpose, and will be spoken of again in their appropriate place — In the treatment of the early stage general blood letting is resorted to for the purpose of modifying the reaction, and in many cases with the happiest effect — Local blood letting is also important — Cold is an important means of subduing excitement in the early stage, and should be used in various ways — The principal of these are cooling drinks, and these are by no means when judiciously administered, an unimportant part — A cool and well ventilated apartment, though not perhaps to be classed as a remedy, is an important point to be seen to — Cold affusion the cold sponging, and the cold douche, wet evaporating cloths, the ice bag to applied to the head, are often of great service in moderating reaction — Great reliance has been placed on antimonial sedatives for allaying reaction — They are given in three ways according to the idea of the physician in their use — Cathartics are among the remedies for this stage Mild cathartics and the neutral salts should be used — Low diet is an indispensible requisite for allaying reaction, but here

nature is sufficiently careful by removing ~~by removing~~ all appetite – Attention must be paid to the local symptoms, and remedies given in accordance therewith –
These must of course depend on what the local complications are in any given case –
Treatment of the middle stage – This stage extends from the close of the first week to between the eleventh and seventeenth day or it may be said to comprehend the interval between the period when nervous exhaustion begins to ~~take place~~ predominate, and the period when a favorable crisis approaches, or a fatal termination is threatened –
In many cases of fever which present a marked typhoid character, the force of reaction is so inconsiderable in this stage, as to need but slight attention in the treatment, but in others it is of more importance and should receive its due share of attention – Ordinarily the practitioner must bear in mind that the exhaustion of the strength resulting from previous excitement and from primary nervous ~~effect~~ depression is great, and points out to him the necessity of materially modifying his antiphlogistic remedies – These remarks apply especially to venesection, which should seldom be resorted to in this stage – Cool

air, cold drinks, cold or tepid sponging, should
oftener than otherwise be ~~resorted to for this~~ contingency —
Antimonials should be laid aside, mild cathartics
should be retained, and by their means the
bowels should be kept in a moderately
open state — The counteracting of ex-
haustion is in a majority of cases the
most important object of treatment in
this stage of fever — The chief remedies
for exhaustion are wine and other acoholic
fluids to which are sometimes added cam-
-phor, opium, chlorine, yest and mercurial-
-ization — The indications for wine are a soft
not jerking pulse, a tongue without much
yellow or white coating, a low temperature,
paleness, and the absence of local inflamation —
The opposite conditions are not always contra
indications, but when any of these are
present wine is not so certain a remedy,
and frequently, preliminary or contemporaneous
treatment of another kind is required —
The proper time for the commencement of
the use of wine often involves a very nice
practical point — As a rule it is better to be
tardy than to resort to it too soon —
Attention should be paid to the effect of the
first few doses — If the pulse becomes more
frequent, the tongue more dry the flush of

the face greater and the coma deepen, it should be laid aside— If the opposite effects are seen then it is indicated and should be continued— Artificial Stimulus having been resorted to and found advantageous it is found necessary to continue it, and from time to time to increase it— Strict attention to this rule is requisite in the night, especially ~~especially~~ towards morning when the tendency to sink is greatest— The treatment of secondary local disorders in this stage of the fever is very generally of great importance— This is much the same in kind as in the first or primary stage but modified in degree on account of the exhausted state of the patient who cannot bear their vigorous use— Local inflamations are usually relieved by topical bleeding, by leeches and by such counter irritants as mustard, cataplasms and blisters— There are a great variety of symptoms which might be detailed in connection with their treatment, such as sleeplessness, a desire to leave the bed and roam about, tympanitic distention of the bowels &c. &c. — These should of course be remedied as far as might be consistent with the condition of the patient— Treatment of the final stage — This period generally consisting of two or three days at farthest is when the

crisis either for life or death approaches, or while it is present - Some one has said the indication for treatment here is to counteract the tendency to death - Little can be done here, save with the utmost care to watch the patient and continue the stimulants already in course of administration and when a favorable tendency is seen, stop the further use of counter irritants or evacuants - Care should be taken to reduce the amount of stimulants as soon as possible - Enquiry should be made as to the condition of erythematous parts, and also as to the condition of the bladder, lest urine accumulate to a dangerous degree - The treatment of ~~coma~~ convalescence is generally a continuation of stimulants gradually decreasing their quantity and the as gradual increase of food - This should consist at first of simple farinaceous articles in the pulpy form afterwards more substantial articles of the same sort, next come soup, eggs white fish and then animal food in small quantities either broiled or roasted - The following are good rules to be observed - "That the appetite precede the supply by a day or two - that much excitement after meals shall involve a diminution in quantity - that in case of the young the meals shall be more frequent and scanty than in adults - and that a foul tongue or disturbed sleep is a

sign of too abundant supply —
I have found my subject growing so
rapidly on my hands. that now
often having written much more
than I intended. I am painfully
conscious that much very much of
great importance that even I could say
is still untold, but my time now
my duties in other respects permit
a more extended view of the subject —

An Inaugural Dissertation

on

Acute Hepatitis

Submitted to the Examination

of the

Provost, Regents, & Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

by

John Cooke

Acute inflammation of the liver is comparatively a disease of rare occurrence in this country, though in countries of a warmer climate it is much more frequently met with.

Symptoms. — This disease is generally very sudden in its attack. It usually commences with a chill, which is soon followed by an increased heat and dryness of the surface, and by thirst. The pulse becomes very much accelerated, and increased in hardness and fullness. The patient complains very much of a bitter taste in his mouth and sometimes vomits large quantities of bile. His urine is diminished in quantity, highly

imbued with bile, and deposites
and sediment on cooling.
The bowels are constipated gen
erally, though in hot climates
there is often diarrhoea from the
commencement of the disease.
These are the general symptoms
of this disease, and they indicate
the character of the accompany
ing fever, which is inflamma
tory in the beginning of the dis
ease, but usually assumes the
typhoid type in the latter
stages; especially when the pa
tient is in a debilitated state
at the time of the attack from
previous disease. Accompany
ing these general symptoms
we have others which are local
and indicate more particularly
the nature and seat of the disease

The most important of these is the pain. This is situated in the right hypochondrium, and is increased by pressure, by cough or by making a full inspiration. In some cases it is sharp and lancinating; in others, dull and throbbing in its character. In the former the surface is usually the seat of the disease, in the latter, the cellular structure of the organ.

Sympathetic pains also often occur in this disease in the right and left shoulder, and in the neighborhood of the clavicle and scapula. The pain of the right shoulder is of such common occurrence that it is by some considered as pathognomonic of hepatic inflammation,

but it is very deceptive, for though frequently present, yet it is by no means always so. It occurs in many of the diseases of the chest, and in the passage of calculi through the gall duct.

When the left shoulder is painful, the left lobe of the liver is generally the seat of the disease. This organ is generally enlarged during inflammation, from the congestion of blood which takes place. This increase in size is sometimes so great, as to produce considerable distention of the walls of the abdomen, and may be recognised by the eye very easily. When it is of a less degree it may be detected by means of auscultatory percussion.

From the sympathy existing between this organ and the diaphragm and lungs, inflammation of it often gives rise to derangements of the function of respiration; such as hiccup, cough, and hurried respiration. The cough is unaccompanied by expectoration, except when the mucous membrane of the bronchial tubes becomes involved by the extension of the inflammation.

The hurried respiration is caused by the inability of the patient to expand his chest freely, from the pain which is produced by the diaphragm in its descent pressing upon the tender organ.

The patient generally maintains

a particular posture in this disease. He usually lies upon his right side with his knees drawn up towards the abdomen, in order to relax the muscles and prevent them from pressing upon the tender organ. When he lies upon the left side, the pain is very much increased, by the connections of the organ being put upon the stretch by its weight.

Jaundice occurs occasionally in this disease, and when the fever runs very high delirium is often present. This latter symptom occurs often in this, than in the inflammation of any other of the abdominal viscera.

Terminations.— Acute inflammation of the liver may terminate either in resolution, or in suppuration. When the former takes place, all the symptoms subside by degrees and the patient gradually returns to his ordinary health. In this country the majority of cases terminate in this way, but sometimes in this, and often in hot climates the inflammation runs on to suppuration. A corresponding change then takes place in the symptoms. The pain ceases, and the patient experiences a sense of weight and throbbing in the region of the liver, with irregular rigors; and often a short time hectic fever usually supervenes.

The pus that is formed in sup-

puration of the liver may be either diffused throughout the organ, or it may be collected into one more abscesses. Sometimes these abscesses are small and numerous, in other cases the pus is collected into one large cavity containing many pints, and occupying the greater part of the liver. These abscesses do not remain stationary, but usually work their way towards the surface by the progressive absorption which they give rise to. When they reach the surface adhesions usually take place between their walls and the parts adjacent. If this does not take place, they are apt to break into the cavity of the abdomen, and give rise to fatal peritonitis. The route which they take

depends upon the part of the organ in which they are originally situated. When an abscess is seated in the upper part of the liver, adhesions take place with the diaphragm and the pleural surfaces corresponding; which become perforated and the pus is discharged into the lungs, and expectorated. Sometimes the perforation extends only through the diaphragm and pleural surface ~~surface~~ in contact with it, and then the pus will be poured into the cavity of the pleura, giving rise to empyema. It will then take the course which purulent effusions into that cavity usually do.

Sometimes the abscess is seated on the front part of the organ

and forms adhesions with the walls of the abdomen. In this case it usually points externally and should be opened.

In some cases abscesses of the liver discharge into some portion of the alimentary canal, as the stomach, duodenum, or transverse arch of the colon. When this takes place into the stomach, the pus will be carried off partly by vomiting, partly by stool; when into the duodenum or colon entirely by stool.

Sometimes an abscess opens in several of the directions mentioned above at once. Thus cases are reported in which they have opened both into the stomach and lungs; and in one ~~suppurtioned~~ by Graves the abscess besides opening into

the stomach by three perforations also opened into the the pericardium.

In whatever direction an abscess of the liver may discharge itself the life of the patient will be placed in great peril. The danger is however much greater in some directions than in others. The most favorable is through the walls of the abdomen. When it bursts into the lungs it either proves suddenly fatal by producing suffocation, or gradually undermines his strength by the harassing cough, the discharge and the hectic fever which follows.

Causes.— Inflammation of the liver may be produced by a variety of causes. Heat of the sun and marsh miasm are prominent agentes in its production though their action is rather predisposing than exciting, in regard to the disease. It is the operation of these agents which render the disease of much greater frequency in hot climates, than in cold ones. They keep the organ in an habitual state of excitement and derange its functions; and thus render it liable to take on inflammation. Its most common exciting causes are exposure to cold, and the intemperate use of ardent spirits. Violent emotions of mind, fatiguing exercise, and the passage of calculi through the gall ducts also

occasionally give rise to it.

Diagnosis.— There are many diseases of the chest and abdomen, with which acute hepatitis is liable to be confounded. That from which it is distinguished with most difficulty is pleurisy, but by a careful examination it can generally be diagnosed with considerable certainty. The cough and difficulty of breathing are much less strongly marked in hepatitis than in pleurisy. In the former the breathing is performed by the thoracic muscles, in the latter by those of the abdomen. In hepatitis the patient lies upon the affected side, while in pleurisy he usually lies upon the sound side. Pressure upon the

right hypochondrium produces pain in the one but not in the other. From pleurisy attended with effusion, hepatitis is distinguished by the aspect of the side. When this is dilated by a fluid, the intercostal spaces will be raised to a level with the ribs or even pushed beyond them, and the side will have a smooth and rounded appearance. On the other hand when the dilatation is produced by an enlarged liver, the ribs will be pushed out, but the intercostal spaces will retain their usual position, and the side will not present the smooth and rounded surface as in the other case.

Hepatitis may be distinguished from gastritis by the greater prostration which occurs in the latter, by the seat of the pain, and the

After general bleeding has been carried as far as the patient's strength will admit, if the pain still continues, great relief may be obtained from local bleeding from the neighborhood of the organ. This should be done by means of leeches, as they are much less irritating than cupping glasses.

The patient should be confined to the horizontal posture, and freely purged. For the latter purpose saline cathartics are generally preferred, on account of their beneficial effect in lessening the force of the circulation.

In regard to the use of mercury in this disease, there exists a great difference of opinion

among authors. It was formerly the custom to trust entirely to its powers; but a better understanding of the nature of inflammation has done away with this practice. At this day many authors recommend it to be administered in the commencement of the disease, in connection with the bloodletting; but the best authorities consider it of more advantage, when given after the violence of the inflammation has been lessened by antiphlogistic measures. In the latter stages of the disease great benefit may be obtained by the application of a succession of blisters to the side.

The foregoing is a brief account of the general plan of treatment during the inflammatory stage of the disease, when suppuration takes place a corresponding change must be made in the treatment. All depleting measures should be laid aside, and the patient should be put upon the use of tonics, and allowed a nourishing diet. If there should be a tendency to constipation of the bowels, laxatives should be given to keep them regular.

If an abscess should point externally, it should be opened by means of caustic potash, or by the trochar. After the pus has ban discharged the cavity should be treated as the cavities of abscesses in other parts of the system are treated.

An
Inaugural Dissertation
On

Inflammation

Submitted to the examination
of the
Provost, regents and faculty of physic
of the

University of Maryland

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Degree of doctor of Medicine

By Robert I. Henry
of
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Inflammation

The term inflammation has long been employed by medical men to denote the existence of an unusual degree of heat, pain, heat and swelling in any of the textures, or organs of which the human body is composed. In treating of this subject we do not wish to confine it to any particular texture or textures, organ or organs; but to give it its broadest construction and its most general adaptation. Not to confine it to Surgery nor physic, but to combine them both in a general and liberal way. To treat a subject like this in a clear and concise manner, to enter into all of its minutest points in a communication like this, would be inappro-

-viate and far from our purpose. However
when we consider the almost every day oc-
-currence of this disease and the ravages it has
made upon the race of mankind, it behooves
us, and it is our most Sacred duty to Endeavour
to understand its "Modus Operandi" Inflamm-
-ation then we say is the paramount and
accompanying foe of almost every disease
and bodily of every external wound whether
it be incised, contused, lacerated, punctured
or any other kind. It was first observed by
the Greeks to which they gave the name Pyretos
Phlogosis or Phlegmon. But it was reserved for
the immortal Hunter to enlighten the scientific
world with regard to this subject. To illustrate
the enlargement of the capacity of the small
blood vessels during the state of Inflammation
and the increased number of those which
become capable of conveying blood, I will
quote the following from Mr. Hunter. I
froze, said he, the ear of a rabbit and thawed

it again: This occasioned a considerable inflammation, and increased heat, and thickning of the part. This rabbit was killed when the ear was in the height of inflammation and the head being injected, the two ears were removed and dried. The uninflamed ear-drum clear and transparent, the vessels were distinctly seen ramifying through its substance but the inflamed ear-drum thicker and more opake, and its arteries were considerably larger -- Thus we see, in inflammation that the blood, is as it were drawn to a centre - There seems to be some latent though active power or influence that stimulates the vital fluid - This power, I think, so far as I have been able to ascertain, is yet covered by a deep and thick veil of mystery - However, we know whatever may be the exciting cause of this common ailment, that wherever it does take place, there is more than a natural

quantum of blood collecting to that part,
whether it be the skin, cellular tissue
or any other part. For example if inflamm-
-ation be produced by a simple bruise
or friction, or in any similar manner
an increased flow of blood to the part
immediately follows. The small blood
vessels supplying the object of nature
are brought into more action and increased
excretion, which is followed by redness,
pain, heat and swelling. Though it does
not always happen that when we have
an increased size of a part, that we
should look for inflammation. Because
hernia is attended with immense swelling
yet we will be very often disappointed
if we should look for inflammation
With regard to this subject there is a
great deal of idle speculation, many
indefinite and conflicting opinions and
deductions. It remains for some genius

yet, probably unborn, to wipe away the remaining mist that still hangs over this very beautiful subject. We know that if heat be excited that a simultaneous action of the blood vessels and nerves will be the consequence. As the cause some have attributed congestion of blood to the parts. This we know, still it does not explain the matter. The question arises. what causes this congestion? This yet remains to be explained. Some have gone so far as to say that the blood vessels possess "per se" an active principle by which they contract or dilate according to circumstances. This last explanation gives us a better and more satisfactory idea of the matter. Whether this be correct or not I do not pretend to say. We know that inflammation has its seat in the capillary systems. Hunter has strongly been inclined to lean upon

upon this Explanation - he strongly advocates
the Contractility or irritability of the vessels
"Inflammation like every other phenomenon
occurring in the animation to this is to
be regarded not as a simple event, but
as one uniformly arising from the continuance
and the complication influence and operations,
of powers, some of which are known
others, at present completely unknown
to us. Simple views whether of health
or disease however ingenious, can seldom
be just." Some have further contended that
in inflammation the general health or
circulation is disturbed and increased
in an equal ratio with the part
labouring under this influence. This
however is generally, I conceive denied
disregarded. If we apply our fingers
to the pulse under these circumstances
we find, almost always such a considerable
difference in their relative pulsations

Tho" we are willing and frank to confess that the general system will stand its greatest sympathy and as it were come to the rescue of a part when laboring and writhing within the folds of this oppressing monster. Often are very often the whole system falls a victim to this disease, which is then termed symptomatic fever. We do not pretend to say that in inflammation the system is free from fever, but to the contrary we will find all the powers and energies of the body responding to and making "assurance doubly sure" that inflammation does exist. It is as it were the effect of a cause, the symptom of a symptom. And we may as well remark here that so long as we find the constitution tending to a healthy condition and at any

time ready to rally just so long we may have every prospect for a salutary termination. This then would naturally lead us to consider another very important point which for so long a time has received the attention of the medical world. It is in relation to the temperature of the parts. The increase of heat or temperature of the part is generally considered to be the same as that of the heart. Though this does not always prove to be the case, and I may further add, that in the relative proportion to the distance of a part situated from the center of circulation so is the difference in the temperature. This is a fact indisputably established. Mr. Hunter (I refer to him because I cannot appeal to any better authority) was the first to ascertain this fact and prove it

by experiments - In a case of his of hydrocele, for which he performed an operation - this fact was very remarkably shown - having introduced a thermometer in the tunica vaginalis and kept there for some time by the side of the testicle, the temperature was only ninety two degrees - introducing it again on the next day, after inflammation had come on, the temperature was found to have risen to ninety eights and three quarters - here evidently was an increase of temperature of six and three quarters. In the outset, I remarked, that inflammation, was employed to denote the existence of redness, pain, heat and swelling, in any of the textures of the human body. When inflammation is excited in any of the organs or textures of the

body these symptoms and signs must always follow. The nerves of a part, may be, simply, distended an increased quantum of blood circulating into the parts. It is an overdistention of the small blood vessels of the part; or an admission of small red particles entering into them, which in their healthy state admit only serum. A pain we have pain attending it. This has been explained, in the following manner, which seems to be very rational and admissible. When the blood has been excited by inflammation, it tends as we have shown to a centre. And when it has thus collected, the consequence is pain, which is produced by an unnatural pressure upon the nerves. It is a fact, well worthy, noticing here, that in inflammation of the

membranes of the nose and mouth, as organs of sense, the sensibility is diminished, and that of the ear and eye, is extremely sensitive. This I have observed and experienced to my very great discomfort; and may be manifested to almost every one especially in the ever changing temperature of this climate. That or an increase of temperature of the part may be attributed to the same cause. still it has been, by some, confined to another, that of the "vital energy". Swelling may also be attributed to the same general cause, in a limited degree; when inflammation is advanced a quantity of serous fluid is thrown out in the cellular tissue, which augments in a great degree, the size of the part, and which, it

has been observed, puts under the pressure of the finger. And consequently has received the appellation of Oedema. These, then are the attendants and handmaids of this mighty Mistress, who claims the whole body for her throne, and sways it with rebellious and oppressive power.

It would not be inappropriate or depressing too much from the subject to add a few words, in relation to the treatment, both general and local. To effect a cure of inflammation, we do not presume to advance any thing new or very interesting. but merely to go over that wide and well beaten track, over which, long before me, so many have trodden. To begin it is only necessary to add the great antiphlogistic regimen

The first that we shall marshall
fourth, of this Spartan like band,
is general depletion. It stands out
upon the tower of health, the ever
watchful Sentinel of disease. Ever
ready and competent to check its
march and progress upon its limits
And when obstinate and resisting
to destroy it. And thus by its efficacy
And incomparable qualities, it
has obtained and receives the
undivided attention and confidence
of the Profession.
By applying it we reduce the
general fullness of the vessels, and
prevent the concentration and congestion
-tion of blood to any part, to which
it has, by some inexplicable power
been attracted. In diseases of the
brain, chest and stomach - the great
centres of the vital fluid - and to

which, in all diseases, we should look with great care and judgement - This agent is the great and almost the only remedy, that we can use with the least expectation of any success - The quantity, that we should take in such diseases, depends by no means, upon the ounce - (we should never be bound by the ounce or quantity) but entirely upon circumstances - The violence of the disease, the strength, temperament and habits of the patient. In cases of Pleurisy, which we often meet with, in this climate, during the winter months, we are compelled to rely upon this agent, almost I might say exclusive of all others, and in this disease we should be guided by the above named circumstances - very often we have the pleasure, in this disease and under this treatment, to find the pain entirely

highly extolled and strongly recommended this important agent, still we do not hesitate to say, very often the greatest caution and decision is urgently necessary and demanded. To enumerate the different diseases for which this remedy is necessary would be traveling over a wider space than our limits will permit or that we think necessary on this occasion.

The next remedy, of this group which follows, is the purgatives.

This is not of so much importance as the one we have just mentioned still it is an important auxiliary. These are to be used often. depletion The best are the saline ~~salts~~ purgatives such as the phosphate of soda or the sulphates of soda and magnesia And the tartrate of potash and soda

They are not only beneficial in discharging the accumulation of fluids from the mucous surfaces of the alimentary Canal - but also for their cooling qualities and effects.

Thirdly - -

Diluent drinks and diaphoretic medicines - these tend to restore the secretions, and are also very grateful to the patients - Very often water iced water - and ice in small lumps may be used with Signal benefit. Tis impossible, to great is the desire for water - to resist the entreaties of our patients - Some practitioners, make it a general rule to exclude this article entirely - which I conceive to be a most lamentable mistake Could we urge no argument in its behalf, we think it sufficient to state that in most of the cases, the anxiety

and worried state of the mind would cause more injurious effects to them than a free exhibition of this cooling and salutary draught.

This agent, in some instances, I have seen act like a charm - not only as a diaphoretic but also as a sedative.

Opium alone is very strongly prohibited, and in truth, I should think it very bad practice - its tendency being to excite and stimulate; but combined with a diaphoretic it is often times used and strongly recommended in low stages of typhoid fever.

The warm bath is not without its efficacy. It acts as a derivative being often persons suffering with affections of the head and throat are relieved by plunging their feet into

a warm bath.

The cold bath is also strongly recommended, by Dr Currie, in simple fevers. If this be properly used in the commencement of the attack it is not unfrequently attended with great advantage. The febrile symptoms are, in a degree, removed, abated and a gentle glow is manifested throughout the whole surface.

I cannot conclude this cursory treatment without mentioning the great importance of a strict and low diet. The patient must refrain from all animal food, and more particularly from that which is far-worse, any stimulating drinks: the latter is far the most expeditious in its operations hence the necessity of guarding our patients against a foe so formidable so fearful. How often have medical

When seen the bitter consequences of
this mistake or rather of this imprudence
Many persons having gone through
the different stages of this treatment
and health once more shedding its
benign influence throughout the
entire person, and nature engaging
herself busily in all her beautiful works
in the restoration of this lost energies
When by one rash stroke, the rays of
health are dissipated and the beautiful
works of Nature thwarted and destroyed
And finery overpressed they sink in
an untimely grave -

Terminations of Inflammation

The terminations of inflammation
of which I am about to speak, are
embraced more particularly under
the province of Surgery - The first
of these has been termed adhesion
Resolution or union by the first
intention - This is almost in every instance

so be united by the Surgeon. Reunion by the first intention was the term that Galen used to express that mode of healing wounds, in which reunion is speedily produced merely by keeping their edges in contact." This is now termed adhesion. When any parts of the body are suddenly torn or cut a part or a bone broken without the laceration of the parts in apposition this process is manifested. The blood which is thrown out as is the case in the separation of parts of the body is absorbed and taken into the system and then a coagulum and plastic lymph is formed, by which the parts of the wound after having been brought together, are united. Who can look on and see this most beautiful operation of nature, without admiring the great wisdom of the Inventor, who has so wisely constructed the body

that it is capable of acting and reacting against any External violence that may be inflicted?- After this Coagulable lymph has taken place, small and minute blood vessels may be seen running through and ramifying for the purpose of continuing the circulation and giving a healthy action to the parts- Mr Hunter was of the opinion that the blood between the seperated parts was a great adjuvant to their uniting; and this I believe was what, he called uniting by the first intention. This was a mistake into which that great man had fallen- a mistake as has been proved since his day- So long as blood remains in contact with the lips of the wound it is impossible for them to unite by adhesion- it acts like a foreign substance to irritate and prevent the process of nature- This termination

is not the discovery of modern days;
it was not unknown to many of those
~~Scientific~~ Scientific men who have
long since passed away down the
rapid current of time. Celsus was
the the first to observe the probability
of restoring mutilated parts - such
as the ears, lips and nose. Galen also
speaks of this. It was about the middle
of the sixteenth century that a new
mode of performing this operation was
adopted; it was that of raising a flap
and taking a portion from the biceps
muscle and applying it to the diseased
part. However, at the present, since
Medical Science has made such
rapid progress, a still better mode
has been adopted - the particulars
of which it is unnecessary for me to
mention or discuss. This truly marks
the advantage of analytical reasoning

and observation; and which in this instance, resulted in a most beautiful idea and an important surgical fact By Noticing the Engrafting of trees led those great and observant minds to apply it to the living human trunk- and which they have bequeathed to all coming time as a lasting tribute and imperishable monument to their labours and discoveries-

Suppuration

When inflammation does not subside spontaneously and by the proper treatment, other symptoms of a different nature follow- The redness assumes a brighter hue, the swelling increases, becomes more pointed and softer, the pain is materially augmented, and the patient distressed by the pulsation or throbbing". It is most generally met with in the cellular texture- Still it does

not claim this as its exclusive province because it is frequently seen or met with in any of the organs or textures - The Constitution is being often subjected to very great inconvenience - It is manifested to us by violent rigours, chills and fever - we do not have the same pain as in inflammation, unless the pus be confined so that its escape is impeded - The effusion is longer continued and the quantity more copious - The duration of the suppurative process is uncertain, and seems to have no fixed relation to the intensity of the inflammation by which it has been preceded or accompanied ?!

Ulceration

Ulceration is that process, by which, the parts in contact are absorbed - There are three things generally going on at the same time in an ulcerative process

First - There is an effusion of plastic lymph by which what are called granulations are formed - Granulations consist of coagulable lymph which has become organized, furnished with numerous delicate blood vessels - Secondly there is suppuration and thirdly there is absorption or the removal of parts."

Mortification

When Mortification from inflammation takes place - we find the circulation stopped, the part cold and all sensation lost and lastly its death - This term has been used by Professor Gibson to denote both Sphacelus and gangrene namely the death of the part, and that state which immediately precedes its death -

—— "Multum restat adhuc operis, multumque restabit, nec illi nato post mille saecula, praeludetur occasio aliquid adjiciendi"

An

Inaugural Dissertation

on

Pneumonia

Submitted to the examination

of the

Provost, Regent, and Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

by

Denis Joseph Dale,

To the Medical Faculty of the University of Maryland the following pages are respectfully inscribed.

To Dr. Samuel Chew

Professor of Materia Medica and Therapeutics.

Sir,

In inscribing the following pages to the Medical Faculty of the University of Maryland. I take leave to acknowledge, with sincere gratitude the favors received from you; As a Preceptor during the time, I had the pleasure of frequenting your Office, the varied resources of your Mind were at all times, devoted to your Students wants, As a disinterested friend I have experienced from you all which that appellation conveys. Kindness, and attention in My sickness, encouragement when obstacles almost impelled Me, to resign the Study of Medecine in hopelessness of success, As a Gentleman in the true sense of that term, your every act towards Me has testified, in conclusion Sir, Believing you to be incapable of wounding the feelings of the less fortunate, whom chance or fortune has brought within your reach, I have only to wish, that all whose position places them —

red or of a dark brownish red, or pinkish colour
More solid, Not crepitous, being impermeable to air
it sinks in water contains No air and is More
easily broken down, and the surface when torn
has a More granular appearance, and the Mucous
Membrane of Bronchial Tubes is of a deep red, third
Stage, Purulent softening, or yellow Hepatization
In this Stage, the Lung is of a yellow or straw colour
Mottled, soft and More friable, Not granular, it
depends on the presence of pus the organ being soak
-ed or saturated with it, diffused throughout, and
when crushed between the fingers is reduced to a
yellowish grey pulp, a circumscribed abscess of the
Lung is a rare occurrence, as also grangrene is seldom
Met with in Pneumonia when it is the Most dis-
tinctive character of it during life is the bad
odour Met with on entering the apartment of the
patient, Pneumonia May effect one or both Lungs
or the inflammation May occupy a part, or the
whole of one Lung, it is More common on the right
side of the Body, than on the left, as to the part

of the Lung, the lower lobes are more liable to Inflammation, than the upper, Bronchitis generally accompanies Pneumonia, it is also generally attended with Inflammation of the Pleura,

Auscultatory signs— On applying the ear to the chest in the first stage that of Engorgement you hear a peculiar fine crepitation, resembling the crackling of salt when thrown on red coals, or the crepitation caused by rubbing a lock of hair between the fingers over the ear, this is the minute crepitation or crackling of Pneumonia, and is a direct and unerring symptom, as the Inflammation progresses, this crackling goes on, to obscure and finally mask the Natural vesicular breathing, when the Murmur of respiration becomes entirely inaudible, you may conclude the Pneumonia is about to pass from the first, into the second stage, this crackling sound is not long heard in any part, but may be replaced by the Natural respiratory Murmur again, when such is the case, it denotes the resolution of the Inflammation, but the crackling may cease, and

No sound heard, a Bronchial respiration, and Bronchophony may take its position, then we may consider the Lung passing, or as having passed into the second stage, or Hepatization, We then find an alteration in its sounds, in place of vesicular breathing, which is the Natural sound, or fine crepitation, which is that belonging to the first stage of Pneumonia, we have no sound at all, or we have the puffing sound which comes from the pervious branches of the Bronchi, through the solid walls of the Chest when patient breathes, and on speaking, the voice is more than Naturally resonant, when compared with the same portion on the opposite side, so that, Bronchial respiration, and Bronchophony, are sounds never heard, but when Lungs are diseased and they vary in degree, according to the position and extent of the Inflammation, being more clearly marked where the Number, and size of tubes involved in Hepatization are greater, they are consequently more distinct when the upper portion, or when the root of the Lungs, is the seat of the Inflammation,

and when it is near the surface. When the Lung becomes entirely Hepatized, Bronchial respiration ceases, but Bronchophony may remain; With Bronchial respiration we find, dulness on percussion, thus; if a portion of Hepatized Lung approaches the side, we shall find a flat sound, but if a portion of crepitant Lung should intervene between the Inflamed Lung, and the walls of the Chest, we then find some resonance, together with this, we find puerile respiration from the Lung, or part of the Lung, being compelled to double duty, to atone for the deficiency in breathing apparatus. At the period when no sound can be heard but Bronchial respiration, it becomes doubtful whether the Lung will gradually change to its healthy state, or pass into the third stage, of Purulent softening, if the former, where a little before we heard Bronchial respiration a delicate crepitation begins to be appreciable, particularly at the end of each act of inspiration, and in proportion as this increases, the Bronchial breathing, and voice, become less audible, the Lungs

becoming again permeable by air, which necessarily diminishes their power of conducting sound, this continues increasing, until the Bronchial breathing, and voice disappear entirely, the vesicular Murmur is heard with the crepitation, after a little succeeds it, and the Lung becomes adequate to the function of Respiration. On a recurrence of the symptoms, the returning crepitation is coarser and more irregularly diffused, and even when the Natural vesicular Murmur exists some crepitation is found for a time to Mingle with it towards the end of a full inspiration, having gone through the first stage, and into the second, from this, it cannot be traced with any certainty by Auscultation, however if this structure of the Lung breaks down, and a part of it is expectorated, air enters the Cavity and you have a gurgling crepitation, when this state has arrived, we May be aided by the other signs, When Pneumonia occupies only a small portion of the Lung, and that deepseated, Auscultation generally fails; thus it is in Lobular Pneumonia,

General Symptoms — First, Chill, followed by heat, and increased frequency of the pulse, a stitch in the side, cough and a sense of oppression in the chest, sometimes it comes on more insidiously and follows Bronchitis, the Inflammation extending from the larger, to the smaller Bronchi and finally to the air vesicles, and interstitial textures, and this may, or may not be accompanied by the stitch in the side, the cough at first may be dry, but is soon attended with the tawney or rusty expectoration, which is characteristic of Pneumonia. Dyspnoea, sometimes slight, sometimes severe, the usual symptoms are pain on one side of the chest, Dyspnoea, cough, a peculiar expectoration and fever. The pain is generally felt below the Nipple, most severe in the commencement, declines and generally ceases before the Pneumonia, It is aggravated by cough, by pressure on the Ribs, or by percussion, patients generally lie on their back, cannot lie on the diseased side, and avoid compressing the healthy side, it requiring full

freedom, having to perform double duty. Difficulty of breathing is considered in general proportionate to the extent of Inflammation. A badly formed Chest, and Fever, have much to do with Dyspnœa, yet in some persons Inflammation of a small portion of Lung, will cause much embarrassment of respiration, in others having a much larger portion Inflamed, the Dyspnœa will be slight, Inflammation of the upper lobe causes greater Dyspnœa than Inflammation of the lower, and it varies in degree, in different cases of Pneumonia. Delirium often occurs in Pneumonia, shewing that the Arterialization of the Blood is interfered with, by the disease. The colour of the Sputa expectorated in Pneumonia is in proportion to the quantity of Blood, with which the Mucus becomes Mingled, forming a yellow, rusty or red Sputa, they become tenacious, and form one homogeneous Mass, if this flows readily along the side of the vessel, we May consider the Pneumonia, as Not having passed the

first stage, but when the Sputa become extremely viscid, and do not separate from the reflection being inverted, we may consider the Pneumonia in its second stage. If the Inflammation recedes, the expectoration changes to that of Catarrh, but if the disease becomes worse, the rust coloured Sputa may continue to the end, or cease altogether, either on account of its extreme tenacity, or of the patients debility, the Sputa accumulate then fill up the air passages, and cause suffocation, in the advanced stages of the disease a fluid is expectorated of the consistence of gum water, having the colour of Liquorice water, or plum juice, (Andral) he considered this kind of expectoration indicative of the third stage of Pneumonia, sometimes pus is secreted, sometimes the Matters expectorated are like those of Catarrh. When Pneumonia passes into Grangrene which is a rare occurrence, the expectoration becomes a Muddy gray colour, and has a fœtid smell, Pneumonia in the first stage May terminate in resolution, or

may become extensive without passing this stage and the patient die, but this seldom occurs, it generally has the symptoms exasperated, and the second stage established with all its phenomena the patient sinks rapidly and dies from Apnea, though resolution may still take place in this stage, and the symptoms decrease in severity, and cease entirely. The average duration of Pneumonia is from ten days to twenty or thirty.

Causes — Sometimes exposure to cold, sometimes no cause, exposure to cold caused Pneumonia in one, peritonitis in another, Pleurisy in a third, why such is the case, seems to be unknown.

Prognosis — In persons hitherto healthy and of good constitutions, Pneumonia is not generally a fatal disease deaths being according to Dr. Power one in fourteen cases, but in Pneumonia when complicated with other diseases, the prognosis is rather grave, so also in broken constitutions.

Treatment — Blood letting, tartarized Antimony, and Mercury. Blood should be taken early, and

plentifully, to reduce the Inflammation, and in the next place relieve the function of the Lungs: and empty the vessels, the principal object is to spare the exercise of the organ, and prevent increase of Inflammation from that cause. The patient should be bled in an upright position by a large orifice and in a full stream, and continued until an impression is made on the System, if relief is not obtained, we must bleed again in a few hours, if pain exists, Cupping glasses and leeches must be applied, patient must avoid all exertion of his Lungs. Blood letting in the second stage, we do not find to have so good an effect on the Inflamed and solid parts, but even then it may have good consequences, it will reduce the force of the heart, and Arteries, will diminish the quantity of Blood, circulating through those portions of Lung which are still pervious and relieve Dyspnoea. When the use of the lan-

-cet would become hurtful, we have recourse to tartarized Antimony and Mercury, tartarized Antimony to create Nausea, and thus controul the Inflammation and relieve Dyspnoea. Mercury given in the second stage with the object of slightly effecting the gum as soon as possible, two grains of Calomel every two hours or three grains every three hours combined with a sufficiency of Opium to prevent its runing off by the Bowels, present the surest Mode of accomplishing our object. however the treatment of Pneumonia in the first stage is free and copious Blood letting, tartarized Antimony eight grains in the twenty four hours, in the second stage when the Lung has become impervious to air, or hepatized Mercury given in the form of Calomel or otherwise so as slightly to effect the gum is then our best remedy by small doses repeated with-

-in short periods, this May be accom-
-plished if circumstances prohibit the
introduction of Mercury this; we can pro-
-cure its specific effects by the application
of it in the form of ointment rub-
-bed in, on the interior surface of the
arm, or thigh, by these Means the Lymph
if any effused would be absorbed, and
the condition of the Lungs improved.
When by the appearance of the features,
coldness of the skin, or by the feebleness,
or irregularity of the pulse, we find the
powers of life flagging, it will be Neces-
-ry to have recourse to Stimulants and
Tonics.* Blisters are sometimes used in
this disease when Blood letting, Antimony
&c have been tried for some time, and
there still remains some Inflammation,
under such circumstances a Blister ap-
-plied extensively over the Chest or under
the Axilla has been found of advantage

* Decoct.n of Serpentaria & Carb.t of Ammonia

but it should not be had recourse to, until the Fever had subsided, otherwise its irritating effect would be injurious, and rather aggravate, than aid in removing the Inflammation.

Lobular Pneumonia in children, occurs sometimes on both sides of the chest the general and local symptoms pretty much the same as in simple Pneumonia, it is generally complicated with Bronchitis and occurs frequently in Scrofulous feeble children after Hooping cough or from Dentition &c if the child has been previously healthly a few leeches may be applied, small doses of Calomel, and Ipecac, combined with counter irritation to the skin. When in place of a Blister we may apply an onion poultice, warm fomentations to the chest, Mucilaginous drinks, Made from Slippery elm bark, Flaxseed, &c we must see that the atmosphere of the room is comfortable

and all exposure to cold avoided, if in the latter stage of the disease the expectoration becomes copious and prostration apparent. Antiphlogistic treatment of course would be improper, our remedial application must be stimulant and tonic. But little reliance can be placed in purgatives in this disease, except for the purpose of keeping the Bowels soluble, all Drastics are to be avoided, so much for the treatment of acute uncomplicated or idiopathic Pneumonia. Modifications of this treatment must take place in different cases, which here cannot well be laid down.

Bilious Pneumonia, so termed from the Jaundice colour of the skin, and is a Sympathetic disease extending through the Diaphragm to the Liver. In this case I should suppose that if we remove Pneumonia, or the cause the effect

will be easily treated, or disappear.

To enter on a detail of the History and treatment of the complications of Pneumonia as they occur in different patients, can be at the most (apart from the condition of your patient) but speculative and theoretical, at the bed side and there alone, can we say what our treatment should be, of those complications one thing I suppose may be said that we have got to treat each as a distinct and uncomplicated disease.

In conclusion, I feel confidence in claiming the indulgence of the Medical faculty if on perusal this may not be found what it should, and that I have not improved those advantages which they have laboured to bestow, of the importance of being properly qualified to the discharge of the duties imposed, with the reception of a Dip-

-lowa I am well aware, during the past Domestic duties called for a por-
-tion of My time, however, convicious that
to be a Physician you but commence
to be a Student on receiving a Diploma,
I feel that the future May be avail-
-able as the past, so far as, a proper culti-
-vation, and application of those subjects,
which have been so ably, and comprehensibly
treated of, by the Professors of this University,
whose teaching has evinced their zeal, for the
interest of their Pupils.

An

Inaugural Dissertation

On

The Necessity of Experience and Observation in the acquisition of Medical Science.

Submitted to the examination

of the

Provost. Regents and Faculty of Physic

of the

University of Maryland.

for the

Degree of Doctor of Medicine.

by

James Donovan

To

Samuel C Chew M.D.

Professor of Materia Medica and

Hygiene.

In the University of Maryland.

This Dissertation

is respectfully inscribed,

In admiration of his acquisitions,

both in Literary and Medical Science,

and in Gratitude for the advantages gain-

ed from his unaffected Kindness,

by

James Donovan.

In complying with the requisition of writing a Thesis on some subject connected with medicine, previous to graduation, I regret that I have to acknowledge that my experience does not permit me to hope that I could say any thing new on the subject. When I consider that Medical Science is obtained exclusively by experience and observation, by true philosophical deductions drawn from these observations, by comparing these deductions one with another, and by the rigid classification and generalization of these comparisons: and when I consider that it has engaged the attention of most eminent men, in every age, notwithstanding whose indefatigable exertions it has but slowly advanced to what it is at present, it could not but be presumptious in me to make any peculiar observation. In place

therefore of transcribing what writers may have said about some one disease, I shall content myself in endeavouring to represent what I consider Medical Science to consist of, and show that it cannot be attained without experience and observation.

There is this difference between physical and moral philosophy, that in physics we contemplate laws imposed by the Author of nature on the subjects of his creation. These laws are fixed and immutable. We cannot change them by theory or speculation. Our knowledge of them is not to be estimated by our acquaintance with the conventional laws of men, but we must endeavour to understand them, and make ourselves familiar with their operations. The case is different in Morals. Morality, in its various departments, is the result of the accidental or premeditated consents of men. It is their own creation, and as such, they can consider, judge of, and alter

its Laws at will. The Standard of Morality or ethics is found different in every country; in different Sections of the same Country, and even individuals of the same Section may observe different Standards of moral Philosophy, and yet all may be right. It will be obvious then that the study of physical Sciences is the more difficult, is by so much the more difficult, indeed, as the Legislator of the former is superior to that of the Latter. If this be true of physics, in the ordinary acceptation, how sublime and ennobling are the studies of the Medical Physician, who proposes to himself to overcome the difficulties that present themselves to his more intimate acquaintance with the Laws prescribed to all matter whether organic or inorganic, animated or inanimated, found in the various kingdoms of nature. No study can be higher than this, whether we consider it applied to matter only, or still more so, to matter modified and influenced by

the mysterious union of the animating principles. Nothing indeed, in my opinion, more clearly demonstrates than the victories gained over the difficulties in Medical science, the elevated position which the author of being wished Man to occupy: in fact, that he wished him second only to himself. For in the wisdom of his creation, the first consideration was that of our eternal, the second that of our temporal welfare: now, the former he has taken into his own hands, by revealing his will; and given us the means of complying with it. but the acquisition of the latter he has confided to ourselves. This is flattering to the Medical Student. He may be excused for thinking that the profession which he has adopted stands, in point of human research, at the head of all. For while the Minister of Religion only announces laws revealed without any research or assistance of his, and while the Lawyer explains the laws and opi-

sions of other men, not wiser, perhaps, than himself. he, the physician, must be acquainted with a profession, comprising all the difficulties, I have mentioned, overcome by the application of the intellectual faculty, without the aid of revelation, or any conventional agreement.

To many, the study of medicine may seem circumscribed and incapable of being reasoned upon. I admit that as the laws by which it is governed are immutable, there is no room for theory, that the hypothesis must be doubtful, and that all progress in it must depend upon our knowledge of facts. But is reason to be the less exercised because there is no room for fanciful imagination? or rather is it not more to be exercised in coming to the knowledge of what a thing actually is, than in being told what I must consider a thing to be? Medical or natural science is not to be depriciated because we

cannot arrive at the ultimate knowledge of things. This would not be treating the sciences justly. The arcana of nature must exist, and God would not be infinite, if finite man could fathom all his works; and it would be worse reasoning to resolve not to reason because we cannot comprehend all. If this opinion prevailed, away with all progress in the arts and sciences, which consists in the application of discoveries to the useful purposes of man. Sir Isaac Newton, if he reasoned thus, would never have illumined the world, if he stopped short, because he could not discover the ultimate nature of light; nor would he attract the world's admiration, if he waited first to discover how two bodies, at a distance, can attract each other.

Medical science embraces all that can be known in physics. It requires a knowledge of these physics modified by vitality. It requires a knowledge of anima-

tes nature both in a healthy and diseased condition. It requires a knowledge of all the articles adapted to these healthy or diseased conditions. And lastly it requires a knowledge of the effects of these articles, when applied to these conditions. In a word, it requires a knowledge of Diagnosis, Materia Medica, and Therapeutics.

Diagnosis consists of a number of branches or departments, which departments, I think, may be comprehended under Anatomy, Physiology, Pathology and Etiology.

Anatomy is variously divided by authors, but for necessary purposes, it may be considered under human or the anatomy of man, and comparative or the anatomy of brutes. Again human anatomy, with which the physician is more especially concerned may be divided into special, general, minute and chemical anatomy. Special anatomy involves a know-

case of the size, colour, consistence, specific gravity, position and arrangement of each and all the organs of the body. General anatomy relates to the organic elements or tissues of which every part is composed: that is, whether it be muscular or fibrous, serous or cellular &c. Minute anatomy relates to the more delicate structure of these organs. With the lens it pushes its investigations to detect the ultimate and final arrangement of the more primary organic elements. And lastly chemical anatomy relates to the chemical composition of the organs. and ascertains of what elementary substances they may be composed, and in what proportion they may be combined.

Now our knowledge of anatomy must be derived from study and observation. There is no *a priori* reasoning that would bring us to the accurate knowledge of the size, colour form, consistence &c of any

organ of the body: nor would the knowledge of one of them give us a knowledge of the others. Neither would a knowledge of the size, colour, form, consistence &c of the organs give us a knowledge of the elements or tissues of which they are composed. Neither would a knowledge of this lead us to that of their final arrangement. And neither again would a knowledge of their final arrangement bring us to that of their primary or ultimate particles.

The next department of Diagnosis, physiology, is closely connected with that of anatomy, and consists in the natural and regular actions of the animated structure, with which that branch makes us acquainted. So far as observation goes, every element-
ary tissue, every organ, and every apparatus of organs performs its own specific and peculiar duty in the living economy. There is therefore a physiology to each organ, and life may be considered the physiology of them all.

But we must bear in mind that the physiology of an organ is a function peculiar to it, while alive only, otherwise we may confound it with the special anatomy of the part. Thus the scull cannot be said to perform a physiological function by containing the brain: nor can the heart and other blood vessels be said to do so by containing blood: neither can the crystalline lens be said to perform physiological functions by admitting rays of light, all of which they may do in the dead body. Now no system of reasoning, however instituted independent of observation, would bring us to the physiological knowledge of the brain, of the stomach, of the intestines, of the liver &c. Neither would a knowledge of the functions of the brain lead us to those of the stomach, nor those of the stomach bring us to the physiological functions of the intestines, nor would a knowledge of the physiological functions of the intestines bring us to those of the liver.

The next department of Diagnosis, pathology, is intimately connected with the preceding two, and in fact depends on a knowledge of them. It may be considered the physiology of diseases, and consists in the knowledge of morbid anatomy or altered structures or diseased conditions: in the knowledge of the processes by which these conditions may be wrought, and in the knowledge of the changes which set these processes on foot, and in the knowledge of consequences of these changes or symptoms they occasion. Pathology is divided into general and special. General pathology treats of the morbid conditions which are common to the whole system, while special pathology contemplates particular diseases. The phenomina observed in pathology take place either in the solids or fluids. The solids may be changed in situation, bulk, form, consistence and ultimate structure. The fluids may be altered in quantity, in quality or in place. Now

our knowledge of pathology must be acquired by observations made of pathological phenomina and of the symptoms to which they give rise. It may appear, perhaps, to some that a previous knowledge of anatomy and physiology may ensure a knowledge of it, but we must remember that they are spoken of as they appear in the healthy subject, and that pathological phenomina must be always the result of disease. The knowledge them of the former cannot ensure that of the latter. With a knowledge of anatomy and physiology, it is true, that we reasonably conclude there is a change in the parts themselves, if a change take place in actions and relations of the parts. For example, if we be acquainted with the anatomy of the vascular system, and with the physiological process of the circulation, we will conclude that some pathological change has taken place, if there be an interruption in the process: but what this change may

be, we have no means, independent of experiment and observation, of ascertaining. This truth may not always appear obvious from the facility we frequently have of coming to the knowledge of pathological phenomina, without what may seem to us experience and observation.

Closely connected with pathological phenomina are the causes, or what is called Etiology, the knowledge of which, as of the other departments of Diagnosis, is to be obtained by observation. We cannot ascertain by *a priori* reasoning why certain diseases should be peculiar to certain seasons, to certain places, to certain ages, to certain sexes, to certain conditions of life &c. And yet that it is so, has been always observed. Here then is another wide field for observation. First the natural or original diathesis of the individual is to be noticed, and then the indefinite changes that may be wrought in each peculiar diathesis, by the diversity

of the seasons, the peculiar circumstances of places, the changes that take place in different periods of life, the constitutional difference of the sexes and the multiform conditions of life. &c.

It would be unnecessary to say anything here about symptoms and physical signs more than that the account of their discovery appertains to medical history, if we were sufficiently acquainted with the departments of Diagnosis. But it is in the acquisition of this acquaintance that the necessity of experience and observation consists. We must be acquainted with each of these departments in the normal or healthy state, then we must enquire into the cause, and closely observe the phenomina of disease, and afterwards investigate, in post-mortem autopsies, the phenomina which the parts affected present. Without these investigations, made under every possible circumstances, we cannot be competent to know

the diseases, and our practice will be purely empirical; as there is scarcely a disease, say Pneumonia, each of whose symptoms may not seem to belong to several others, which will inevitably lead the quack into error, but which when understood and combined, will bring the physician of experience and observation to an infallible Diagnosis.

Materia medica, the second part of medical science, is the term for, and embraces all the substances capable of making sanative impressions on the human system, wherever found in the three kingdoms of nature. And let me add that, as the aid of surgical instruments is called in on account of the incompetency of the articles of materia medica, properly so called, they too should be classed among them. If the departments of Diagnosis require, as I have said, experience and observation, no less so does Materia medica demand our attention. In-

deed when little or nothing is known a-
bout the final modus operandis of medi-
cines, we are driven through necessity to the
observation of each of its articles. If we con-
sider, on one hand, all the diseases to which
the human family is liable, and on the
other, that the products of all nature are known
open, from which to select the remedy
best adapted in each case, the labour seems
to be superhuman, and yet it is presumed
that the medical man knows what that
is in every case. It required a great deal
experience to bring the knowledge of ma-
teria medica to what it is at present. It
has been the subject of observation since
the earliest dawnings of history, and yet no
one will venture to say that all the articles
useful in medicines have been discovered,
or that all the medical properties of those dis-
covered have been ascertained. There is then
a wide field for experience in materia medi-
ca, and in assuming the study of it, in the full sense

of the term, we should take into consideration regimen, clothing, temperature, locality, exercises, in a word, all the circumstances of every day life. To the medical phylosopher there exists few but objects of more interest than an extensive cabinet of materia medica. In casting his eyes over so extensive an assemblage of substances, he will naturally enquire how it has happened that substances, at one time, in the highest esteem should have fallen into total disrepute, and why others of humble pretensions should have maintained their ground through so many centuries. Such fluctuating opinions would produce an unfavourable impression with regard to their efficacy, were we not to consider that the march of mind is onward, and that man is becoming wiser and more experienced from generation to generation.

With regard to the history of materia medica, medical writers, no less than other historians, have ever been ambitious of tracing

up the origin of their art. But its history is soon lost in the regions of fable or in the wilds of conjecture. It is not likely that it could be carried back to the period when remedies were first applied, or that any country, however uncivilized, could be discovered, in which its inhabitants were destitute of medical resources. The painful feeling of the sufferer, and the anxiety of those about him must have incited the spirit of enquiry and trial to procure him relief. But we find that its progress towards its present advanced state has been very slow and unequal, unlike the steady and successive improvements of other branches of natural knowledge, and that its advancement has been continually arrested or entirely subverted by the caprices, prejudices, superstitions and knavery of mankind. Unlike other branches of Science, it is incapable of generalization. For when in the history of remedies, are we able to produce a discov-

ery or improvement, which has been the result of that happy combination of observation and analogy, which has so eminently rewarded the labours in modern sciences? For every problem which involves the phenomina of life is unavoidably embarrassed by circumstances so complicated in their nature, and fluctuating in their operations, as to set at defiance every attempt to exclude their presence or neutralize their influence. An observation or experiment made upon the effects of medicine is thus liable to a thousand fallacies, unless it be carefully repeated, under all the varying circumstances of health and disease, in different climates, and on different constitutions. To such causes we may attribute the barren labours of the ancients, nor should we be surprised at the imperfect state of the materia medica, as far as it depends on experience, complicated as it is by its various

relations with physiology, pathology, and chymistry, and obnoxious as it ever must be to the prejudices of opinions and to the illusions of sense. In addition to these obstacles, the progress of materia medica has met with others of a moral character. A belief in the interposition of supernatural powers in the prevention and cure of disease has prevailed in every age and country. Every disease the causes of which did not strike the senses, was immediately attributed to the wrath of Heaven, to the resentment of some invincible demon, or to some malign aspects of the stars. Hence the introduction of superstitious remedies. An investigation into the properties of medicines seldom found place in minds occupied by the virtues of charms and other absurd practices. And when medicines were applied, their virtues were attributed to the mystical rites and

ceremonies with which they were prepared, rather than to any inherent power in themselves. Charlatanism and quackery, with their evil consequences, followed this state of things by an easy step. In its more advanced state also, the medical science received incalculable injury from the various systems opinions and theories promulgated from time to time. The humoralists, the solidists, the chemists, the mathematicians, the followers of the doctrines of signitures, the Brownists &c had each their favourite system, to which they wished to make every thing yield, rather yield themselves to the true investigation of the phenomina, which each case represented, and to the discovery of their remedies.

This brief notice of the difficulties that have impeded the knowledge of materia medica will be sufficient, I trust, to show that it cannot be acquired by any a priori

reasoning, and that in coming to the knowledge of it, we must divest ourselves of every thing that may impede our progress. Let us get rid of all superstitious credulity, of all chimerical theories, of over devotion to authority and established routine, and let us depend on facts alone, founded on disinterested experience. It will be little to our purpose to enquire when or why such and such an article was introduced, whether its virtues were discovered in the wild and fanciful attempts of the Alchymists, or in the sober second thoughts suggested by its superstitious applications. All that is left us to consider is their Therapeutical application to diseased conditions of the human body. And when we consider that there are not two medicinal substances in the whole range of Materia Medica, perfectly similar, that is, whose operations have been found to continue similar under every condition

of the human body, and which owe their similarity, both in Cases and small quantities, and in their primary and secondary effects, to modes of operation which are compatable with each other, &c. we must conclude that this study demands our most serious application.

To facilitate this difficulty, as much as possible, in the study of materia medica, it is usual to divide it into various classes, according to the views of different writers. Now this classification is not easily made, on account of the various properties of some of the articles, nor is it absolutely necessary that it should be made. For as we must be acquainted perfectly with the individual articles, we will have the privilege of locating it wherever its different properties may place it, rather than be forced to attribute certains properties to it, because it is found in a cer-

tain place in a classification. But if we wish to adopt a classification, the most rational is that by which we group together the medicines that act more especially on each of the systems of the body, viz. the nervous, the arterial, the muscular, the digestive, the glandular, and cutaneous systems. Each class will have to be divided into as many orders, as each system is capable of being affected, and again each order is to be subdivided and arranged according to the manner in which we wish the affection peculiar to each order to be accomplished. Now taking an individual system, it is by experiments alone that effects of a substance upon it can be ascertained, nor will the knowledge of articles acting on this bring us to that of articles on the other systems, so as to be able to classify them. Nor will the knowledge of articles, considered as a class bring us to that

of the orders, nor will the knowledge of an individual of an order bring us to that of all the articles that might be considered as belonging to it.—

Finally, we come to Therapeutics, the third part of Medical Science, which comprises the doctrine of the treatment of disease, that is, it teaches us how to apply the articles, the properties of which we know, from our knowledge of Materia Medica, to the cure of those diseases with which Diagnosis makes us acquainted. A good therapeutist ought therefore to be familiar with every branch of Medical Science, he should not only have had opportunities of witnessing, and of studying their treatment himself, but read extensively the recorded observations of others, in addition. He should be able to discriminate between the operations of Nature and those of Medicine. He should know as well when to abstain from giving it, as when to give it; for in management of diseases, it is not always necessary that medi-

cine be given, unless its use be clearly indicated, or in the case of individuals, whose faith is not reposed in any system of treatment, that does not include its internal use, from their inattention or ignorance of the preserving actions of the living principles. The fundamental object in every indication, is to put a stop to, or mitigate the disorders in organic actions, and then to remove any alterations that may have supervened in the tissues consequent on such disorders. The attention then of the therapeutist must be directed, in the first place, to the primary lesion, and afterwards to the secondary or symptomatic. These morbid conditions are, at times, extremely difficult of detection, in consequence of circumstances attending them, which may render the treatment equally as difficult, and appreciable only by experience and observation. Rational therapeutics must be founded on physiologico-pathologico deductions. It

is important to enquire into the cause that may have produced or is producing the phenomina. The insufficiency of attending simply to the symptoms can indeed be readily shewn by a few examples. A feeling of debility is a distressing symptom in the most inflammatory, as well as in the most enfeebling disorder. Itching of the glands penis is symptomatic of stone in the bladder. Itching of the nose occurs in irritation of the lining membrane of the intestinal canal. Pain is sometimes felt in the shoulder in hepatitis. Painful retraction of the testis occurs in nephritis. But it would be unphilosophical to attend solely to these symptoms: the primary seat of irritation must be inferred from them and from further examinations, so that a rational basis may exist for the curative indication.

In the treatment of disease, the modifying circumstances are very numerous, some

of which are connected with the individual, as age, sex, profession, habit, &c. others with the disease itself, as cause, seat, period, intensity &c. For instance, in infancy, there is said to be great nervous susceptibility, and mischief is liable to be produced in the head. At the age of puberty the lungs are more in danger, and in old age the nervous susceptibility becomes diminished, there is torpor of the intestinal functions, and a tendency to diseases of the urinary organs. Of the sexes, the female possesses more nervous irritability, and otherwise, under the various conditions of menstruation, pregnancy, lactation &c, if not even by different organization, is more impressible. The original Diathesis or conformation must be also born in mind, lest consumption, appoplexy, Scrofula, or any other hereditary diseases may be developed. Long acquired habits of whatever kind, also modify the system in regard to therapeutical indica-

tions, and different Climates produces diffe-
rent diseases, which require also to be dif-
ferently treated. In a word, the unnumera-
ble circumstances of an individual
may suggest innumerable modifica-
tions of treatment. And as to the disease it-
self, it is of the utmost importance to be a-
ware of every thing that may constitute a dif-
ference, and require a variation in
treatment. For instance, pain of the
abdomen, constipation of bowels, and
vomiting are found in interitis, Colica
Pictonum and in common colic,
nor can we arrive at the true indication
without enquiring minutely into the
cause of the malady. The seat of disease
must also be diligently sought: as oppres-
sion of the chest, a dry and frequent cough, and
a painful sense of suffocation, indicating
a thoracic affection, may be caused by ir-
ritation about the larynx, as in elongation
of the uvula. The different periods of the disease, as

of pneumonia, have to be differently managed. The decided heroic antiphlogistic treatment in the acute stage, must often give way to a stimulating and sustaining one, in the sinking or typhoid state. In a word, the mode of treatment must be modified by the cause, seat, period, intensity &c of the affection.

The modus operandi of remedies is not always clear, nor is it absolutely necessary that we should know it. For as the first question is whether or not the medicine does good, a knowledge of the manner, though often advantageous, may generally be considered a matter of curiosity. Indeed as all confidence in medicine is founded on experience and observation, it is of secondary account whether its remedial action be effected by direct Contact, or by the indirect, through the nerves, by sympathy, by absorption, by derivation, or by its chemical combination. But notwithstanding the

inutility of prying too minutely into the modus operandi of remedies, it is of vital importance to be perfectly acquainted with all the effects of an article on the living economy. If we take the order of Cathartics, the general property of which is to open the bowels, there is not one of them, besides this feature, that does not possess some specific and inherent power, which makes it appropriate for the special condition of some organ, for which it may possess an affinity. The nitro chloride of Mercury, for instance, is said to affect the upper part of the intestinal canal, and direct its influence especially to the liver. Aloes affect the lower part of the large intestines, and direct their influence to the pelvic viscera. While the saline and oily substances affect the whole tract of the canal, and direct their influence on the mucous membrane. Hence a selection must be made to suit the particular condition of each case, for it not un-

frequently happens that such militating circumstances exist as to put into requisition the nicest shades of discrimination.

In conclusion, let me add, though it be a repetion, that a medical man, should not only be a physician, but also a metaphysician. The powerful influence of mind over the functions of the body is well known. This influence may be said to be exercised either in depressing or exciting the passions: and experience convinces us how necessary it is to be aware of these influences on the system of a patients, as the body sympathizes with the soul in disease more than in health. He should know that vexation disturbs the functions of the stomach; that sorrow diminishes the energy of the nervous system, that fear paralyzes the muscular powers, that tenor acts powerfully on the secretions and excretions, that joy acts as a powerful stimulus on the nervous system, that confidence acts as a tonic on the whole frame &c.

An

Inaugural Dissertation

on

Puerperal Fever.

Submitted to the examination

of the

Provost, Regents and Faculty of Physic

of the

University of Maryland;

for the

Degree of Doctor of Medicine.

by

W. G. I'Anson

February 1846.

Dedicatory Epistle.

It is due to Professor Hall, to state, that this Thesis has been for some time prepared, and that until the delivery of his lecture on Puerperal fever I had no means of ascertaining his views on the subject: Could sufficient time have been obtained, I should have substituted for the present; some subject; upon which his views, and my own, more perfectly agree. In deference to his opinions, and to forestall misapprehension, I have introduced this explanation. And as further testimony of my high regard for his character, and in token of my admiration for his talents, and esteem for his virtues, this Thesis, is most respectfully dedicated to, Professor R. Wilmot Hall, M.D

by

The Author

Puerperal Fever, though known from the earliest records of Medical science, until comparatively a recent period, received but little attention from the Medical faculty.

Attention was first drawn to it about the middle of the seventeenth century, when it occurred at Paris, as a malignant epidemic in the obstetrical wards of the Hôtel Dieu.

No further notice was taken of it, until in the succeeding century, its re-appearance as an epidemic, again commanded the attention of physicians. Since this latter period, the alarming mortality it has occasioned, has kept it prominently before the profession, and the closest study and research have been directed to the discovery of its nature and causes.

It is to be lamented that these investigations have not resulted more successfully; and it may well be questioned, whether they have not been more prolific of mystery, than revelation.

On examining the works of writers on this

disease, we are constantly confounded by the conflicting opinions, which are presented to us. Some contend that the disease is but a simple inflammation of the peritoneum, some, that this inflammation is of an erysipelatous character, some, likening the recently delivered uterus, to the surface of an amputated limb, point to the irritation there imagined, as the nucleus of the malady, some refer its origin to inflammation of the uterus and appendages, and think it presents different appearances, according as different tissues of that organ may be attacked with inflammation and some declare the disease to be an <u>original</u> idiopathic in its nature, which may occur, and progress to a fatal termination with, or without inflammation, as an accompaniment.

Some assert that the disease has its commencement in the solids; this is opposed by others, who contend for a previously vitiated condition of the blood, and others maintain, that the primary impression is experienced first by the

nervous system. Whence this great discrepancy of opinion has proceeded, it would be unprofitable to inquire. A fruitful source of it may be found in the fact, that each observer, unmindful of the numberless causes capable of modifying the affection, has based his theory upon the particular form of the disease, which was presented to his immediate observation. And hopeless would be the attempt to educe harmony from this mass of discordant opinions. Abler hands have undertaken the task, and failed.

And in the present performance, I confess I seek the accomplishment of no higher purposes, than to exhibit some acquaintance with the subject of my remarks, and to illustrate my capacity to spell, and write the English language with tolerable correctness.

Notwithstanding the facilities for the study of puerperal fever, which scientific men

have enjoyed, and the assiduity with which they have pursued their inquiries, we have still to lament our ignorance of the true character of the disease. Other, and less equivocal data are required, that may dispel the confusion, which at present envelopes the subject, before we can arrive at certain, and reliable conclusions. But we are warranted by what we already know, in pronouncing that puerperal fever is not a simple disease, but occurs under different forms, each of which may be modified by a variety of circumstances, as by season of the year, peculiarity of the individual, condition of the atmosphere, and by a number of other causes. All of its forms are susceptible of reduction to two varieties.

One, wherein the character of the affection, is sufficiently marked by all the indications of inflammation, well and boldly expressed.

Perhaps the terms which have been employed

to denote the presence of inflammation, as puerperal peritonitis, metritis, and others of like import; are more especially applicable to this variety. The forms of the disease which constitute it; though frequently fatal, are often amenable to treatment; and the readiness with which the symptoms succumb to the judicious employment of depletive remedies, sufficiently demonstrates their inflammatory nature.

The affections which compose the second division manifest; on the contrary, a very opposite quality. In them, the props of life seem to be withdrawn at the very commencement of the attack, all efforts to restore the vital energies prove unavailing, and if recourse be had to depletive means, the fatal termination is manifestly accelerated.

The term puerperal fever, in the pages which follow, is used with reference to this latter division, and to the consideration of puerperal fever thus distinguished, its causes, and

contagiousness, the remainder of my remarks shall be devoted.

Puerperal fever, most frequently commences its attack, within forty eight hours after delivery. It is ushered in by a rigor, more or less severe, and by headache; there is pain in the abdomen, the pulse is small, quick and vibratory, the tongue is coated brown; nausea, and in the latter stages, vomiting of green colored matters may occur, the intelligence may be retained, or coma, or delirium may come on; there is great deprivation of muscular power; the countenance is expressive of great dejection, and the whole appearance of the patient betokens alarming prostration. The lochia, and milk if they have made their appearance, are generally suppressed. Death usually occurs on the third day. Extensive inflammations of the peritoneum lining the uterus, or other abdominal viscera, are generally discoverable upon dissection. Sometimes the inflammation is found to extend to

other tissues of the uterus; pus has occasionally been discovered in the uterine vein, effusion of lymph into the cavity of the abdomen are frequently met with, and extensive disorganisations in distant organs are sometimes observed. Some cases have been reported, which proved rapidly fatal, and where no trace of inflammation, and no anatomical lesion whatever, could anywhere be found

It would be an easy task to swell this list of symptoms, and post-mortem appearances, from books within my reach; but it is presumed, enough have been enumerated to characterize the disease.

Diligent research has been exerted, to ascertain the causes of puerperal fever, but by their obscurity, they have thus far escaped detection.

In some instances, the attack may be plainly traced to injuries received during parturition, to exposure to cold and moisture, to confinement in a corrupt atmosphere, and to like causes, whose operation we can appreciate. But oftentimes it occurs where none of these causes have been

applied, and where we can account for its appearance, in no other way, than by supposing the presence of some noxious principle in the atmosphere, or assuming that the disease is capable of propagating itself by contagion.

The contagiousness of puerperal fever, has long been, and still continues to be, a much mooted point among physicians.

The majority of the profession perhaps, is opposed to its truth. This unpopularity of the doctrine, is mainly attributable, to the impossibility of demonstrating with absolute certainty, the fact of its contagion; probability being the nearest approximation that can be made to certainty. The possibility that the attack was produced by atmospheric agencies, must ever oppose itself with insurmountable obstinacy, to the most convincing proofs of the contagionist. In considering the question of contagion, the subject of predisposition, well deserves to be taken into account. Without this

predisposition, without this peculiar aptitude, or liability to contract a particular disease, persons may be exposed to the fury of the most fatal epidemic disorders, and suffer no ill. effects. Without it, some physicians, less wise than curious, and more lucky than either, have dared to inoculate themselves with the matter of the Plague itself, and their insane temerity escaped punishment; while hundreds around them, in the use of every precaution to avoid contagion, were daily falling victims to the disease. It has been often noticed, that during the prevalence of an extensive epidemic, the blood even of healthy individuals differs in many respects from healthy blood; denoting an impairment of the vital powers, and a proportionate proclivity to disease. This circumstance favors the presumption, that the predisposition, is generated by the same causes, which excite the attack, and may be considered the initiatory stage of the disorder.

These effects, are manifestly due to atmospheric causes operating generally, and their power in the propagation of disease, is unquestionably great:

But some phenomena in epidemic puerperal fever, seem to indicate a concentration, and more partial direction of these forces. There are some occurrences in epidemic puerperal fever, hardly explicable in any other way, than by admitting its contagiousness. How otherwise does it happen, as is constantly seen, that the disease, occurring in the practice of a physician, attends him wherever he goes, tracking him far and wide with the accuracy of a blood hound, and this too, when not a case occurs in the practice of neighboring physicians, though actively engaged in obstetrical practice. This has obtained in every epidemic of the disease, and would seem to show, that the disease in epidemic is rather the consequence of contagion, than contagion an incident to the epidemic. Like causes produce like effects, and if the cause

were general, so should be the disease. But such partial effects should make us suspect the operation of a cause as partial. Dr Gordon, by observing such appearances, became convinced that the cause of the disease was a specific contagion, and not owing to a noxious constitution of the atmosphere. According to his observations, the disease attacked such women only, who were visited, or delivered by a physician, or served by a nurse, who had previously attended on patients afflicted with the disease.

He had abundant proofs, he says, that every person who had been with a patient in the puerperal fever, became charged with an atmosphere of infection, which was communicated to every puerperal woman, who was brought within its sphere. Dr Gooch, seeing such frequent verifications of this principle, during an epidemic which he witnessed, declared, that he could foretell what woman would be attacked, by knowing, by what midwife she was attended.

Dr Armstrong, himself a skeptic, relates that out of forty three cases, which occurred at a certain place, forty were in the practice of a single surgeon and his assistant: enough, one would think, to cure him of his skepticism. Nor have we need to cross the ocean to search for facts in proof of the contagiousness of puerperal fever. Our own country unfortunately, furnishes a superabundance.

In a paper on the subject, published some time since, by Dr Holmes of Boston, and in a report of the Transactions of the College of Physicians, of Philadelphia, a strong array of evidence adduced to show that puerperal fever is frequently communicated from patient to patient by the intervention of physicians or nurses. And there is good reason to believe, that the disease has availed itself of other aids than the corrupt atmosphere of a hospital, to exhibit an epidemic character, at the Alms House, in this city.

The fact that women exposed to the disease, have escaped an attack, is no proof of its non contagiousness

The same thing has happened in diseases, about whose contagiousness no doubts are entertained.

If a disease, because it is contagious, must necessarily attack every one brought within its influence, a fatal epidemic should depopulate a country. A predisposition on the part of the patient, as has been observed, is an element as essential to the institution of the disease, as the presence of the particles of contagion themselves.

Contagion is not relied upon as the sole means by which puerperal fever may be propagated. Its existence must at one time have preceded contagion, and the same cause which produced it then, can produce it now. A noxious constitution of the atmosphere may originate the disease, which contagion then assists to spread, and by multiplying the sources of the poison, maintain the vitiated condition of the atmosphere. Thus do these two causes keep alive, and assist each other.

The principle of the contagiousness of puerperal fever, receives additional support from some

resemblances that may be observed between it and other diseases universally allowed to be contagious. Among these resemblances may be mentioned, its intractable nature. All contagious diseases have a certain course, which they will fulfil, however we may oppose their progress. Puerperal fever observes this law. The insufficiency of all treatment, constitutes its most prominent feature. Again, all contagious disorders in their epidemic progress, observe gradations of increment and decline, so does puerperal fever, and like them, after a total disappearance, recurs unexpectedly it may be after the lapse of years, and without any apparent cause. As one of the predisposing causes of puerperal fever, should be ranked Erysipelas. Between these two there would seem to exist some mysterious affinity. As I have already remarked, puerperal fever, has by some been considered, but an erysipelatous inflammation of the peritoneum. This was opposed, because it was not admitted that serous membranes were

liable to attacks of ~~inflamm~~ erysipelas. But- Drs Hall and Dexter, in their account of erysipelas, as it prevailed in Vermont and New Hampshire, in the years 1842-3 show that no tissue in the body was exempt from attack. However the connexion between them be explained, that there does exist a close alliance appears, from the fact of their frequent association. Whenever an epidemic of the one prevails, some cases of the other are sure to occur. Erysipelas frequently destroys the children of women who have died of puerperal fever. Injuries received during the examination of a body, dead from puerperal fever, will give rise to malignant erysipelas, and if the virus be received from the body of the woman while yet alive, the same ill effects follow its introduction into the system. The origin of some of the most extensive epidemics of puerperal fever, have been traced to erysipelas. Their fatal character, and rapid march, their contagiousness, and the alteration of the blood, which they produce

or by which they are produced furnish additional proof of resemblance between them.

The capacity of puerperal fever to excite certain diseases, and to be excited by them, has attracted considerable attention of late, and the researches of Mr Storrs, an eminent pathologist have led him to the following conclusions. 'That puerperal fever is capable of imparting to any person, not in the puerperal state, by actual contact or close approximation, any of the following diseases. First: inflammation of the peritoneum, or other serous membranes, accompanied by a low type of fever. Second, Erysipelas, either local, such as occurs from dissecting wounds, or general, as on the face or person. Third Typhus fever, with various accompaniments, and in a variety of forms.

I might cite other authorities, and adduce other facts in support of the contagiousness of puerperal fever, but enough has already been said.

Its contagiousness has never been, and perhaps can never be, clearly established, but its reasonable probability has repeatedly been made apparent.

So long as the affirmative of the question continues to be supported, by so large a portion of the talent of the profession, and so long as a probability exists, that the disease may be propagated by contagion, the common impulses of humanity should dispose the physician to extreme caution in his conduct, lest he become the instrument to communicate a disease, which his art is insufficient to relieve. He should do more. He should carefully guard his patient from all possible sources of contagion, and by proper hygienic precautions, and the employment of other prophylactic means, should remove, as far as he can, all the causes which may provoke an attack. He should act in all cases, as if the fact of its contagiousness was clearly made out.

He should reflect, that by a contrary course a fearful responsibility is incurred

He may become, as Dr Holmes has
expressed it: 'a private pestilence, scattering
disease far and near, and administering
death, where he would relieve distress.

An

Inaugural Dissertation

on Pleurisy

Submitted to the examination

of the

Provost Regents & Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

by Richard B Baker

The pleura is a serous membrane and the diseases attacking it are analogous to those occuring in the peritoneum and other similar textures. It is a closed sac lining the ribs and is thence reflected on to the lungs giving it an investment. By this demonstration, it is shown to consist of two portions a costal and pulmonary and from the nature of the membrane it may be clearly infered, that inflammation may attack either reflection, and that the part inflamed will have some characteristic symptoms determining its locality.

Acute pleuritic Pleurisy is characterized by acute pain in the side, rigors, dyspnoea, loss of appetite, followed by a high fever with hot burning skin, and a full bounding pulse.

The pain is of a sharp lancinating stitch and is generally described as being similar, to the sticking of a knife in the side. It occupies some particular spot and is most commonly seated a little below and to the outside of the nipple; but this is not invariably its seat

since it is frequently felt as high as the
angle of the Scapula - beneath the Sternum
and so low in the right Hypochondrium
as to impress one with the belief that acute
Hepatitis exist. The severity of the disease
is in proportion to the circumscribed point
the smaller the seat the more acute is the
disease. The expression of the patients countenance
is that of great anxiety and he generally lies in
that position which will relax the muscles &
suspenses all cough or any involuntary motion
which will bring into exercise any of the
muscles - The pain is increased by pressure
& percussion. Such are the most common symptoms
existing when the costal portion of the pleura,
becomes the seat of inflammation, but when
the pulmonary portion be implicated, pain
may not be felt unless upon a deep inspiration
be made, and may be felt again as acutely as
when the costal pleura suffers -
The pain commonly exists from the onset of
the disease, but it may be vague and fugitive

for a day or two and then become fixed. When it exist under these circumstances, it may be confounded with muscular Rheumatism, Pleurodyne &c but these may be easily diagnosed by attention to the state of the pulse, their fugitive character and the amount of general soreness felt equally over the ribs as between them.

Dr Watson is of opinion that many patients who suffer pain in the shoulder and over other portions of the Chest, are the subjects of dry Pleurisies who are told that they have Rheumatism, or some nervous disease –

Inflammations of membranous organs are much more severe than when the parenchymatous structure is implicated, this is strikingly illustrated when we contrast Pleurisy with Pneumonia. Pneumonia is often ushered in by rigors and a stitch, which results in a slight adhesions and then becomes Pleuropneumonia whilst pure uncomplicated Pneumonia has no such symptom.

After the pain of Pleurisy has existed for

a day or two it either subsides spontaneously
or is effected by remedial agency and then
takes place, an effusion of lymph or serum
or both.

The dyspnoea in this disease is caused in
the first place by the fear of expanding the
chest and when effusion has taken place,
it is due entirely to the compression of the
lung by the effused liquid. It is often increased
or lessened just in proportion as whether the
opposite lung to the one affected by Pleurisy
be diseased or not, if it be sound it will expand
~~fully~~ so as to suit itself to the inconvenience
which the other experiences — it is also lessened
or aggravated by the rapidity with which the
effusion takes place, if the effusion goes on
slowly, the lung which is the seat of the Pleurisy
has time to establish its circulation and accom-
modate itself to the altered condition, if however
the effusion is quickly poured out, the powers
of the lung are rendered more ~~feeble~~ feeble and
dyspnoea is the result.

7.

The manner in which respiration is carried on is also to be taken into consideration that is whether it be executed by the muscles of the diaphragm or carried on entirely by those of the Thorax - By these means we determine the seat of the inflammation - if respiration be carried on by the muscles of the Thorax then disease is located somewhere in the diaphragmatic reflections of the pleura, but should the reverse be the case and respiration be executed by the muscles of the diaphragm and abdomen then it is that we find the inflammation in some of the upper reflections.

Much debate has been entered into as regards the position of the patient during an attack of acute Pleurisy, and there seems much discrepancy of opinion - One class of writers contending that the patient lies upon the affected side whilst it is maintained by another class that the position is upon the sides not

the seat of disease, whilst Andral differing
with both classes splits the difference and says
that the position is diagonal rather inclined
to the side in which the disease is seated.
Dr Watson (and I believe our Professor is of
a similar opinion) thinks that the patient
lies upon the well side during the existence
of the excessive pain in the beginning of
the attack and that he alters it when
effusion takes place. His views accord very
well with common sense and experience to one
unskilled by experience – he says that
the patient is unable to lie on the affected
side in the beginning, for the pressure then
will increase the severity of the pain: but
when effusion takes place he then lies
upon the diseased side in order to give
the opposite lung an opportunity of
fully dilating thereby rendering the dyspnoea
more tolerable – it will not only embarrass
respiration by preventing the dilatation
of the lung but there must

effusion, it will pass over the medicaments and compress the unaffected lung and thus effect a good deal of embarassment-

The cough in this disease is dry and hacking and does not occur in paroxisms unless it be complicated with Catarh, Bronchitis or Pneumonia - if the complication be Catarh then will be slight expectoration - if it be Bronchitis the white frothy ~~sputa~~ mucus will determine it, and should Pneumonia exist the rusty prunlike sputa will at once point out its existance.

There are other symptoms which are constitutional as fever - which is characterized by a hot burning skin full, hard and bounding pulse - the tongue is dry and covered with a white ~~frost~~, the urine is very high colored and scanty -

Should all or most of these symptoms be taken into consideration, they may be looked upon as pathognomonic, but taken separately they are delusive, since they

seen in many other pectoral affections.
The symptoms which we have noticed
above are either local or general, those of which
we are about to speak are purely physical
and have a particular bearing upon
the subject.

Complete or partial absence of the vesicular
murmur in the lung diseased and the establish-
ing of pueril respiration in the opposite one
After a few days shall have elapsed and effusion
taken place we have Bronchiphony or the sound
of one speaking through a tube vernically called
Aegophony. This sound has been assimilated
to the peculiar nasal twang of Punch by
Laennec - the bleating of the goat by others -
it is produced by the vibrating motion of a
thin stratum of liquid lying between the lung
and the auscultators ear - and can be most-
conveniently heard beneath the angle of the
Scapula. If the effusion go on to a considerable
amount this aegophony ceases and then
a recurrence of it becomes a very good

diagnostic sign of the decrease of the effused liquid.
When there is effusion into the pleural sac we have dullness on percussion the most dependent portion being subject to a greater degree — this varies according to the position of the patient.
Palpation imparts to us during the healthy condition of the lung an evident thrill which is totally lost when the pleura becomes the seat of an effusion — this thrill however is quite evident when the hand is placed upon the side of the healthy lung.
We also find upon examination, that one side is much more voluminous than the other — this is the result of effusion, so marked sometimes is this change ~~is so evident~~ as to be noticed at first sight and is found when measured to be some inch or two larger — we also find bulging out of the intercostal spaces and a wider than natural separation of the ribs from one another this is quite a remarkable feature and shows us at once that effusion has taken place

There is one variety of this disease termed dry Pleurisy in which there is no effusion — it is far more common and so slight as not to give any great amount of inconvenience, but invariably leaves some slight adhesions to commemorate its existance. It sometimes however assumes a grave form and is ushered in by a chill and a sharp stitch which last for a day or two, and then subsides — some dyspnoea is felt and that in proportion to the acuteness of the pain.

Dry Pleurisy may be contradistinguished from that form in which effusion takes place by having recourse to percussion — percussion here is not dull as when there is liquid in the chest but gives out the peculiar resonant sound natural to the lung — There is also a characteristic symptom in dry pleurisy, which will point out to us the state of the lungs and prevent our confounding it with Muscular Rheumatism or Neuralgia, that is, a peculiar friction sound induced by the rubbing of the free surfaces of the pleura upon which there has been a deposit of lymph from which

this sound then, is produced by the rising and falling of the lung during the act of respiration.

Occasionally the pulse and fever will demand blood to be taken from the arm, yet it more commonly subsides under the application of ~~rest~~ leaches or cups over the seat of inflammation - and the internal use of Squills, nitre, Eupatorium and other stimulating diuretic and diaphoretic medicines - rest also is of great value to ensure a speedy cure and mercury may be given to prevent too extended adhesions, still some slight adhesions will be found to exist after every case of Pleurisy.

The ordinary causes of Pleurisy, whether it be acute frank Pleurisy attended with effusion or the simple dry variety, are ~~the~~ exposure to cold, moisture with cold such as the free ablution of the body whilst the body is much heated, sitting in the draft with only a portion of the body exposed External violence is not an unfrequent cause - such as stabs, bruises, fracture of the ribs the sharp points of which irritate the pleura - the introduction of air whether it be communicated

through a inflamed Bronchi or by a puncture into the pleura through the intercostal muscles—
It may attack persons of all ages and sex, at any season and in all climates, yet more frequent in cold damp latitudes, and many cases are on record of its intrauterine existance.
Inflammation first attacks the serous cellular coat of the pleura and then red spots are seen with lines radiating as from the center—
The most important lesions revealed by a post-mortem examination are lymph which causes the adhesion of the pleura and the effusion of serum— Stratums of lymph have been found superimposed upon each other to such a degree as to impress certain Pathologists with the opinion that the membrane was thickened— but the recent researches of those who have taken sufficient notice of this feature have found it to be, but lymph becoming organized putting on this character.
The pleura is so arranged that adhesions may take place between the pleura of ribs & in its costal reflections or in that portion covering

the lungs or its free surfaces may be so glued as to entirely obliterate the sac-

These adhesions may take place, so as to fix the lung within a small space, and thus entirely unfit it for the purpose designed; and thus we find the opposite lung hypertrophied, having to execute double duty.

When the lymph is first effused we find it of a whitish gray colour, afterwards there are traces of bloodvessels formed and the whole becomes and exceedingly ~~organized~~ vascular and organized membrane. Again upon making an autopsy of a person who has died of Pleurisy we find a great quantity of serum with flakes of lymph swimming about freely and but slight adhesions attaching the various reflections of this membrane to the parts in contact-

From the experiments of Andral it is clear that the organization of lymph does not depend upon the time that has elapsed before the death of the patient ~~but~~ for this observer found that in some cases of only a few days illness that

the lymph was perfectly organized, whilst in that of others who had been ill for some time there was found lymph floating in sewer now showing the least signs of vitality. From these observations he determined that in the young & robust that lymph would become organized in a few days: but on the contrary that curdy unorganized lymph, granular deposits, with copious ~~deposits~~ effusion, tending to become puriform would be found in those of a weak broken down constitution and among the scrofulous—

The colour and consistance of the effused liquid vary much— at one time,— at one time it is ~~white~~ clear serous, or watery fluid without colour, this thin fluid is often turbid and disposed to be puriform, sometimes it is tinged more or less with blood, and at other times it consist of blood which has separated into serum and crassamentum.

The prognosis in this disease is ~~very~~ always favourable and few die unless ~~the~~ Pleurisy be complicated with Pneumonia.

In the treatment of Pleurisy there are three great indications - to ease pain: lower the fever and to prevent adhesions.
The patient should be confined in a recumbent posture - in a room of equible temperature and freed from all exciting causes -
The first indication is met by bloodletting, this should be done promptly & decidedly regarding the effect and not the number of ounces -
A good to be obtained is to bleed till the pain shall cease or until syncope be threatened, sometimes a recurrence of the pain will be felt and we shall have to resort to this mode of depletion perhaps two or three times.
Local depletion is also necessary since we find great good to result from the application of cups or leaches - over the seat of inflammation, It is supposed by many that cups exert a happy influence both by their depletion and revulsive power -

As an adjuvant to bloodletting in relief of pain a roller may be passed around the Thorax, which prevents the elevation of the ribs during each act of inspiration.

To abate the pain and decrease the arterial excitement it is necessary that the alimentary canal should be evacuated, and for this purpose we use Glauber purgatives and Nauseating doses of Tartarized Antimony. It is to be recollected that Antimony does not bear that tolerance as it does when the parenchyma of the organ is affected — We also administer stimulating diuretic and diaphoretic medicines - in order to excite the natural secretions of the body to a healthy action. Pleurisy has frequently been known to be cured when powerful diuresis or diaphoresis have been established.

The last indication is to absorb the effused liquid and promote adhesions - for this purpose Calomel becomes the basis remedy and should be given so as to touch the gums as speedily as possible -

for this purpose it becomes necessary to combine with the Rotachloride a small proportion of opium. When the system will not admit the internal use of calomel the desired effect may be produced by rubbing ~~the~~ Mercurial ointment in the arm-pits groins &c— After the fever has abated and the absorption of the fluid seems slow, we should have recourse to blisters and these should be dressed with mercurial ointment, that we may establish a drain, which will act both by its revulsive effect and produce a kind of thirst in the veins, thereby hastening the absorption of the effused liquid.

An

Inaugural Dissertation

on

Malaria and the diseases

to which it gives origin.

Submitted

to the

Provost Regents and

Faculty of Physic

of the

University of Maryland

for

the degree of Doctor of Medicine

By

Thomas King Carroll Brooke Jr.

of

Baltimore Md.

February 1st 1846.

To Doctor Samuel Cheever
I have assumed the liberty
to dedicate the following
pages, as an evidence of my
exalted estimation of his
ability as a Professor and
of my profound respect and
grateful acknowledgements
for his polite and kind
attentions -

Malaria, and the diseases
to which it gives origin.

There are few subjects pre-
sented to the medical mind
more pregnant with interest
than that which we have
placed at the head of this paper.
And to practitioners in certain
localities of our country, there
are none more important,
none which demand from
him a more serious and
patient investigation.

From an early
period in the history of medicine,
the origin of this class of fevers,
was attributed to certain emi-
nations from stagnant
pools and marshy districts.
Of the intimate nature and
composition of these peculiar
emanations, little was known

And although the light of medical science has continued to increase in brilliancy and power dispersing many of the clouds by which the medical horizon was obscured, there is still connected with this subject, much that is vague and unsatisfactory—

Indeed so

fruitful have been the attempts fully to explain it—that some of the learned in the profession have denied its existence and attributed its effects to causes which are more inexplicable than that they are intended to supplant—

The most fashionable doctrine at the present day, is that, which pronounces malaria as a cause of those fevers, intermittent, and places in its stead, atmospheric vicissitudes. in this, climates and

depressions of temperature or the different conditions of the atmosphere as regards its moisture & dryness-

I shall cite a few of the more obvious objections to this, & state, briefly, some of the numerous facts by which the doctrine of malaria, is supported-

That heat will excite and cold depress, I am free to admit, but their effects singly, or alternately, are scarcely analogous, certainly not identical with those referable to malaria- He who has observed the paroxysms of a quartan ague, occuring with almost unvarying regularity, has noted the identity of the symptoms preceding & accompanying them, cannot for a moment doubt that

- derives its origin from a
cause sui generis or specific.
We frequent
ly witness the deleterious
effects of heat, especially when
it is succeeded by the opposite
extreme of cold. Every one knows
the danger of exposing his per-
son to the depressing influence
of the latter, when it has for
some time been subjected to
the exciting action of the former.
Indeed, we occasionally meet
with cases in which the
nervous system is either com-
pletely overpowered and death
is the result or violent reac-
tion is established and infla-
mation enkindled. But their
combined operation cannot
explain the periodical ~~exacer-~~
~~bation~~ invasion, exacerbation,
& decline of an intermittent
fever.

A man after violent

and long continued exercise,
under the scorching rays of
a July sun, suddenly takes
into his stomach a large
draught of cold water. His
system may either succumb
to its depressing influence, or
inflamatory reaction may
ensue. Has any one ever seen
an intermittent fever result
from such a cause? And yet
I think it must be conceded
that the principle is the same,
and differs only in the mode
of its application.

Again if the
cause of these fevers be respon-
sible to the alternate elevations
and depressions of temperature,
or to any other atmospheric
vicissitude why is it that of
two families residing upon
opposite sides of the same street
the one will invariably be

attacked while the other side is invariably be exempt? Yet this fact has frequently been observed that when a dwelling is so situated that the prevailing winds blow from it towards the marsh no disease occurs and vice versa.

And why is it that during the prevalence of these fevers persons sleeping upon the second floor of a two story house may be entirely free from their invasion while those upon the ground floor are the subjects of its ravages? Dr Sanford in his Elements of Hygiene states the following fact which strongly corroborates this view:

"The walls of the wing of the Hospital at Padua where the clinical wards are situated is washed by a branch of the sluggish Brenta, and it has

frequently happened that the windows of their wards have been carelessly left open while to take an hour, several of the patients have been attacked with intermittent fever in some instances of the pernicious kind. This has never happened in the female wards, which are immediately over them. There is no reason to think that more care was taken with the latter than the former.

And Dr. Ferguson when a medical officer in the British army at St. Domingo, remarked that two thirds more men were taken sick on the ground floor than in the upper stories.

Although Dr. Bell in his declaration of war against the doctrine of Malaria, asserts that he entertains

to field with the pure intention of establishing the Truth. I think he renders himself liable to charge of making facts conform to theory, when he attributes all this to difference in climate.

Again any one who is familiar with this class of fevers, must have remarked the speedy decline of the more virulent forms, under a sudden fall of the thermometer from 85° & 90° to 75°. most of the cases occuring during this change assuming the intermittent or milder form. Now here is a sudden vicissitude of temperature not only not producing these diseases, but exerting a marked effect in mitigating & preventing them — this fact it seems to me can only be explained in this way, the temperature is not sufficiently elevated for the evolution of

Malaria in a concentrated state—

In short, while we grant that vicissitudes of temperature are powerful predisposing causes, I think the facts bear me out in the assertion that they are incapable in themselves of producing these peculiar fevers—

Their agency may perhaps be thus explained:- By the operation of heat during the middle portion of the day, the skin is excited to increased action- it is consequently left in a debilitated and irritable condition- the cold of evening succeeds, and owing to the debilitated state of the capillaries, they are incapable of resisting its depressing influence- their functions are impeded or wholly interrupted

the functions of the mucous membrane of the intestinal canal from its sympathy with the skin may also become deranged, and diarrhœa or fever ensue; but no periodical fever can result – Still something more be added – call it what we may, but it must be something of a specific nature –

Having as I think partly clearly indicated the doctrine of mutations of temperature is wholly unsupported by facts, I might take up the various other substitutes for malaria, and show that the latter in the present state of our knowledge, is liable to fewer objections than any which have preceded or followed it =

Many other facts might have been adduced, in support of

the position I have taken, but I deem it necessary. I think it has been fully established that these fevers derive their origin from a peculiar poison called Malaria, emanating from certain localities under particular circumstances, of its intimate nature & composition as I have before remarked we are profoundly ignorant. It has eluded the most delicate chemical tests, and no appreciable difference has been detected in atmospheric air in localities where it is known to exist & in those where its effects have never been observed.

But say the opponents of this doctrine, would you have us credit the existence of that which is not perceptable to any

of the senses - a mere abstraction?
I will answer this query by
putting another. Does any one
deny that there is a peculiar
emanation from the person of
a man laboring under small-
pox, which is capable of produc-
ing the same phenomena which
we behold in him? And has
chemical analysis ever been
able to detect it? Has any
appreciable difference been
discovered between the atmos-
phere of a room which is loaded
with these emanations, and
the purest atmospheric air?
In this case, as in the other we
are only made aware of its exis-
tence by its effects.

Perhaps the
best, certainly the most true
account of the nature of malaria
would be an acknowledgement
of our utter ignorance. It may be

proper however, to state some of the many opinions which have been advanced from time to time.

The doctrine itself originated with Lancisi. And the views of various authors since his day, differ from him in no essential particulars.

The most prevalent conjecture among the profession is, that it consists of minute particles of animal & vegitable substances in a state of decomposition, perhaps dissolved in aqueous vapor. This opinion is advocated by Dr. Eberle in his Practice of Physic. Others deny that it is the product of animal, vegitable or aqueous decomposition singly or combined. To this conclusion I have myself been led. It may not

be out of place, to mention some of the facts upon which this opinion is based.

The belief in the vegetable origin of malaria prevailed from an early date, and is probably to be attributed to the almost universal prevalence of this kingdom, and the absence of any other cause which was supposed to be adequate. But we have no positive, no historical evidence of its production by the humid decay of vegetables. On the contrary, the most luxuriant growths of this kingdom has frequently been found with an entire absence of the chief fevers I am considering. While on the other hand, they have prevailed most extensively in localities where not a particle of vegetable matter could exist. Dr. Ferguson states

the following facts, which it seems to me render this position perfectly impregnable=

He says the first time, he discovered an extensive epidemic intermittent in the army, was in 1794, when after a very hot & dry summer, the British troops took up their encampments in South Holland. The soil was a level plain of sand, with a perfectly dry surface, where not vegitation existed or could exist= It was percolated with water to within a few inches of the surface, & the water so far from being putrid was perfectly potable.

The river Tagus is at Lisbon about 2 miles wide. One side is a hilly country, the foundation of the soil being rocks, there are free water courses among

the hills. This is the healthy side. The other is perfectly dry & sandy and is most pestiferous.

Moreover, in the most unhealthy parts of Spain, we look in vain, towards the close of summer for lakes, marshes, ditches, pools, or even vegetation. Can any thing more clearly demonstrate that vegetable decomposition is not essential to the production of malaria? In fact that the latter is perfectly independent of it?

The notion of vegetable origin has no doubt arisen from the fact that this species of decomposition usually accompanies its formation. It is a concomitant not a cause.

Secondly, we doubt the capability of animal decomposition to produce malaria. In support

of this position, I would merely refer to the workshops of the "Knackers," who are constantly engaged in converting the dead horse to useful purposes, & the meat of cats & dogs, & bones for the preparation of hartshorn. The atmosphere of these shops is extremely offensive; but neither the workmen, nor contiguous families are liable to malarious or any other disease, which can be referred to this cause.

Again, hundreds of students with impunity for months, the tainted air of the dissecting room. Many facts of a similar import might be cited; but it cannot be necessary. Dr. Dunglison very justly remarks upon this point, that admitting putrefactive miasmata to be, & they unquestionably, are under certain circumstances, morbific,

the facts exhibit- that diseases produced by them, are not such as are attributed to Malaria.

Thirdly, we have no satisfactory evidence that Malaria may be produced by aqueous decomposition. The bilge water in ships although at times exceedingly offensive, has never been known to produce its effects. But we have a strong fact occurring at Lord:

In and near Lisbon there are reservoirs where water is preserved in during three months of absolute drought. These reservoirs are placed near the dwelling & sleeping apartments & contain water in the most concentrated state of foulness & putridity. Yet no fevers has ever been known to arise from this cause -

It is manifest then that malaria requires for its production, something more than vegetable, animal or aqueous decomposition.

If further proof be demanded, I would merely refer to the Pontine Marshes, & to the innumerable other sources of animal & vegetable decay, & ask why is it, if these circumstances be alone requisite to produce malaria, that we do not find its effects in every situation, where they exist?

I am persuaded, that no matter how great the quantity of these substances may be, separately, or in combination, no such emanation can result, unless the soil itself be malarious. I go further, I think they would impede its formation by intercepting

the above says-

From a careful review of all the facts with which I am acquainted the opinion which I feel warranted in expressing is briefly this, that these fevers originate in certain localities from a specific poison which for want of a better name we call malaria- that this poison is the product of certain chemical changes occurring in the soil by the operation of heat & moisture-

Of the particular train of circumstances which are necessary & of the intimate nature of the generation we are as yet confessedly ignorant- If my views be correct would not the elucidation of that investigation & chemical analysis to the particular soils, when its effects are observed offer a

greater probability of unveiling the mystery, than the attempts which have hitherto been made to detect it in the atmosphere?

But although human knowledge has not been able to penetrate the mists by which it is surrounded, or chemical analysis to detect its intimate nature & composition, we know many of the laws by which it is governed. 1st It requires for its evolution a certain degree of heat & moisture. Hence we find it more active, more concentrated in those marshy districts which are occasionally submerged by water. On the other hand, too much moisture prevents its formation, & it is only in the latter stages of the evaporation of water from soils which are malarious, that it is produced. In other words,

it is formed, by the action of the solar rays upon the soil during the latter stages of the drying process.

It is carried up during the day with aqueous vapour, possibly dissolved in it & at night owing to its greater specific gravity than atmospheric air it descends, & is in greater concentration near the surface of the earth. It is owing to this fact & not to a difference of climate as Dr. Bell supposes that persons upon the ground floor are more liable to its effects. We can also thus readily understand how a high wall or wood may obstruct & confine it.

It may be conveyed to a considerable distance by gentle currents of wind. This fact was known to Lucian. He says

"Hanc vero lucem, quam venti meridionales per se non habent unde nam accipere, et per incultam Latii planiciem quaque versum convehere possunt, nisi ex Paludibus Pontinis." But while it is capable of being carried for several miles by gentle winds, it is dispersed & rendered innocuous, by storms & blasts. This may enable us to explain why there is an evident falling off, as it were, of the more violent forms of malarious fever immediately after a storm. the malaria already formed is dispersed, & the fall of the thermometer impedes for a time father emanation.

It is said that long exposure to it, diminishes the susceptibility of the system to its influence. This may be true so far as

as the particular class of fevers I am considering is concerned— But I am convinced that many of those violent cases of neuralgia, & other chronic & obstinate nervous affections, many of those cases of "bad health" so frequently observed among those who have long inhabited these localities, may be traced to the continued operation of this mysterious agent—

It would be highly interesting to dwell much longer upon this part of our subject & on the various speculations with regard to it; but I must hasten to notice some of the diseases to which it gives origin— the effects by which its existence is known—

I shall briefly advert to Intermittent, Remittent & Congestive fever—

To give a detailed history of these diseases, with the various remedial agents which have been employed in their management, would far exceed the intended limits of this paper.

A brief notice of the more prominent symptoms, with the chief indications in their treatment, will constitute the subjects of my remarks.

Intermittent fever then is the first-grade of miasmatic disease. Accordingly they are most common at those periods, when the poison is generated in its least degree of concentration, as in the beginning & close of autumn. Its character is known by its occurring in regular paroxysms with intervals of perfect freedom from fever.

I shall not mention the various symptoms by which it is accompanied or the different phases & types it assumes, but pass at once to a consideration of a few more important of the many agents which have been employed in its cure—

Sulphate of Quinine and carbonate of iron stand first as to efficacy & safety, when properly administered. Great diversity of opinion exists as to the degree of preparation, which should be made previous to its exhibition. If the case be one of simple intermittent, if there be no evidence of a disordered state of the secretions, or of functional derangement of the liver, or any positively extra indicating symptoms, Quinine may be given at once. If the paroxysms have been interrupted, a

mild mercurial aperient will complete the cure - My remarks are of course confined to the mildest form of the disease.

In other cases, it will be necessary to precede its employment by mild aperients & alteratives - And in some again, a combination of the alterative & tonic plan, will be followed by the best results - With regard to the dose 12 or 3 grs. every 2nd or 3rd hour so that from 12 to 24 be taken during the apyrexia will almost always put a stop to the disease - When the intervals are short the dose may be increased or more frequently repeated - But I am persuaded that the effect is more permanent when the medicine is gradually introduced into the system -

When the paroxysms are unusually severe,

and a return is liable to be attended with highly dangerous, perhaps fatal results, the safety of the patient depends upon it being given in such doses as will secure its immediate impression. In such cases, it should be given 10 or 20 grs doses repeated pro re nata. I shall recur to this under the head of congestive fever.

In chronic cases when visceral complications are present, this removal is necessary to insure the permanent success of the remedy.

Arsenic has obtained considerable reputation for the cure of this form of fever. It is now extensively used in the fenny parts of England under the name of Tasteless ague drop. It is said to particularly applicable to those cases

of obstinate intermittent which have long resisted Quinine. Most of these cases however, depend upon some visceral derangement & yield almost invariably to Quinine in combination with alteratives. At all events, Arsenic is a more courageous & certainly less objectionable as general remedy than Quinine. It is usually given in the form of Fowler's Solution in doses of 5 or 6 gtts every 4 hr or 5 hr hour during the intermission.

The Sulphate of Zinc. Preparations of Iron Acetate & Citrate of Ammonia have all been tried, but their antiperiodic powers are questionable, certainly not to be compared with those of Quinine.

For the removal the

those troublesome enlargements of the spleen, so frequently the sequence of this disease, the persevering use of Quinia, with some of the preparations of Iron, & occasionally alterations will be found the most successful practice -

Remittent like Intermittent fever is the result of the poisonous influence of Malaria - But the poison which produces it - is more active, or the system upon which it - is acting is less able to resist its morbid influence - It is accordingly met with at periods when the circumstances are favorable to the production of Malaria in a more active or concentrated state -

It is characterized by paroxysms of exacerbations alternating with remissions

I shall only attempt a rough outline of its most prominent features with the principal indications in its treatment—

The chief danger to be apprehended in an attack of Remittent fever is from local complications. And the parts most liable to be attacked are the brain liver & alimentary canal—

This predisposition to particular parts may perhaps be owing to the known sympathetic relation between them & the skin. By the alternate action of heat during the day & of the cool air at night— they are left in a debilitated & irritable condition incapable of offering much resistance to any cause by which blood is sent in greater quantity or with increased force into their vessels— & so exciting sufficient power to

to throw off this accustomed load. By every exacerbation, an addition is made to that already remaining. And if the tumult in the arterial system be violent & long continued, or if the parts be previously much debilitated, inflammation ensues.

We thus see that the same causes which predispose the system to Remittent fever, at the same time predispose those parts to become implicated. The one is the effect of a specific poison. The other is produced by this effect acting upon organs previously debilitated. And here, I think is all that can reasonably claimed for mutations of temperature. The tendency of the brain to become involved may be owing to the reflex action from the

stomach, liver & intestines, & in some instances perhaps, to the specific action of the poison itself—

From what has been said, it may at once be inferred the indications are, to moderate the arterial excitement, to prevent local complications, to remove them when they have arisen, & to restore the disordered secretions— The first & second are best answered by V. S. Indeed, I have always seen the best effects follow this agent in the onset of the disease, not only in cases where it was positively indicated, but in those where the pulse would bear it— The surface when hot & dry should be sponged freely with cold water or vinegar & water & cold acidulated drinks

taken as libitum. The bowels should be kept in a state of condition by mild aperients, always avoiding active cathartics for obvious reasons.

The patient should be lightly covered & cool air admitted freely into his room. The old custom still prevalent among many members of the old school of covering the patient with blankets & stopping every avenue by which air could possibly gain ingress, ~~is worse than useless~~ with a view of inducing perspiration, is as absurd as it is pernicious. The secretions should be corrected by mild alteratives.

This plan in a great majority of cases will prevent any local disease taking.

Should they occur & general V. S. be contraindicated, leeches or cups should be applied over the affected organ. When the brain is the seat of this local complication, they should be applied to the temple or nape of the neck. The hair should be removed & ice applied to the head. Blisters may follow this local abstraction of blood. But when the intestines are inflamed, more benifit will be derived from fomentations over the abdomen, and if blisters still be deemed advisable, from placing them upon the inner side of the thighs.

I have frequently seen the distressing nausea & vomiting so often encountered in this disease, yield at once, to a few cups over the Epigastric region, though there be present no tenderness on pressure. A mustard poultice may follow the application of the cups.

With regard to the proper period for the exhibition of Quinine a great variety of opinions have been expressed. I think I am prepared to state from frequent observation, that when the fever has been moderated & the skin is not much above the natural temperature & above all when the tongue manifests a ~~disposition~~ tendency to become clean around the edges, and the liver gives evidence of a disposition to resume its function, Quinine may be given with perfect safety & with the most favorable results.

In such instances, it should be combined with some mild mercurial. 2 grs. of Quinine with 1/2 gr of Blue mass every 2 or 3 hours. Indeed, when the secretions are beginning to be restored to their healthy condition I would give Quinine though there be present a considerable degree of fever. When given thus with proper judgement

and discrimination, I know of no more certain diaphoretic. The dose must of course be increased or diminished to meet particular indications; but as a general rule, the former I have mentioned will be sufficient.

I may here remark, that Remittent-fever in a vast majority of cases, when seen early and properly managed, is as completely under the control of medicine as any disease we are called upon to combat. And yet, there is none in which ignorance or impatience may inflict more serious & irreparable mischief.

Having thus very briefly adverted to the most important symptoms of Remittent-fever & hurriedly glanced at the at present indications in its treatment, I proceed at once to a consider-

tion of the last division of my subject- Congestive fever-

It is not my intention to speak of those cases of incidental congestion, occurring in almost all forms of febrile disease; but of that, which is the effect of a specific poison in short of that communicated in certain states pon congestive fever-

As occurrence in localities favorable to the production of malaria, its connexion with the various forms of miasmatic disease bear me out in the conclusion that they all originate from a common cause, and differ only in the activity of the poison & the resistance which the system is capable of opposing to its influence- We accordingly meet with it in localities, and at periods in which the malaria is generated in a highly concentrated state-

A cursory glance at the phenomena of congestion

over the mode of its attack, the various nervous derangements by which it is accompanied render it at once sufficiently obvious that the centres & branches of the nervous system are the recipients of the primary impression.

Between innervation circulation & respiration there is so close, so inseparable a connection that the functions of any one of them cannot be interrupted without impeding & ultimately checking the operation of the whole. Human life indeed has been said to stand upon a tripod, remove either of its props, & the whole framework totters & must ultimately fall.

Nor in the disease under consideration the nervous system is so completely overpowered by the morbific poison it has received that it is incapable of imparting that influence to the heart & arteries without

which their functions cannot be maintained. Accordingly we find the capillary circulation impeded or wholly interrupted, the equilibrium of the general circulation destroyed, and the heart & large blood vessels engorged & oppressed, unable from the attraction of their accustomed stimulus to relieve themselves. The wheels of life become clogged and unless timely & effectual aid be rendered, at last stand still and life "itself is extinct"

The limits of this paper will not permit me to detail the various phenomena presented in congestive fever - I shall therefore confine my remarks to those means which experience has proved most effectual in arousing the system from what is aptly called the cold stage.

We are called to a man who may have been sick for a day or two. We are told that he was seized with a chill. That the

subsequent reaction had been slowly established. that heat was but partially diffused over the surface & that in each ~~subsequent~~ successive paroxysm the cold stage had been more & more protracted. We will find him most probably in the following condition: his whole surface as cold as marble and covered with a clammy tenacious moisture. his pulse is scarcely perceptible, perhaps entirely absent. his breathing is oppressed hurried & laboured with a livid appearance in his face. he is distressed with nausea retching & vomiting. he complains of intense burning in the epigastric region with urgent thirst. he is tossing from side to side as if endeavoring to rid himself of the load by which he is nearly overpowered: or he is lying apparently indifferent, to ~~his fate~~ the result & his stools may be passing from him

involuntarily - perhaps the brain be the seat of congestion or the lungs so much oppressed as to render them incapable of effecting the necessary changes in the blood. his intellectual faculties may be impaired they may even be more lucid than before & in strange & striking contrast - to the energies of the body which are sinking around them -

In such a case as I have briefly sketched I would base my whole hope upon Quinine in large doses - We may apply sinapisms or blisters to the extremities - we may use the most indefatigable means for the purpose of exciting the capillary circulation by friction or otherwise - We may administer brandy or wine by the pint = all in vain - Now this state of things the result of common causes we might - turn with confidence to remedies such as these; but

being the effect of a specific
poison it must require the spe-
cific remedy - being the result
of a peculiar poison - it must
require its peculiar antidote -
Not remedy - that antidote is
Quinine -

But he who expects
to derive the full benifit of
the medicine in such cases or
with case or obtain intermittent
or cut short a Remittent fever
will be sadly disappointed -
And is it not reasonable to
suppose that if a certain quan-
tity of the remedy be necessary
to correct a certain morbid
impression of the poison when
the latter is more active and
the impression more marked the
quantity of the counteracting
agent must also be increased?

If a loss of a certain
power be capable of necessary
a certain degree of resistance
Who any one deny that when
the resistance is greater the

power must be increased. Now in Congestive fever the lever is Quinine, the resistance Malaria.

Moreover in Intermittent fever no immediate danger is to be apprehended. the impression may be gradual. in congestive fever a decided impression must be secured at once, or the patient dies.

But apart from this I appeal with pleasure not unmingled with pride to the only true test, experience. The only cases of recovery I have ever seen, were those in which this practice was adopted. My plan has been to give 20 grs at once & repeat it larger or smaller doses according to circumstances. When the stomach rejects it, it should be thrown up the rectum. It may sometimes be advantageously combined with Calomel & Opium. In the first case which terminated favorably under my obser-

vation, 80 grs in 20 gr doses, every hour. In some 40 grs have been sufficient, while others have required 100 to produce the same effect.

As auxilliaries wine & brandy sometimes do good. I have never seen the slightest benefit from blisters sinipisms or friction.

Over the modus operandi of Quinine in these fevers, great mystery seems to hang. If I were to hazzard my humble opinion it would be briefly this: that it is directed especially to the nervous system and produces upon it a peculiar impression which supplants or counteracts the morbid impression which the malaria has made. And as the congestion is the result of this morbid influence upon the nervous system, & not directly upon the blood as has been supposed by some, when the cause has been removed or counteracted, the effect ceases. In other words, the equilibrium of the circulation

is restored to power as the nervous system is rendered capable of imparting its natural stimulus—

It is proper to remark, with regard to the treatment of Congestive fever by large doses of Quinine, that I do not claim it as a discovery of mine—Many practitioners in the South & several upon my notice have long adopted it—with the most gratifying results—My own experience added to the more extensive & accurate observations of others warrants me in expressing the pleasing hope that congestive fever will at no distant day cease to be considered the reproach of our art—

An Essay
on Yellow Fever
Submitted to the examination of
The Faculty of Physic
Of the University of Maryland
For the degree of
Doctor of Medicine by
John Dare of
Maryland

There is no disease, the study of which is more important and interesting to a practitioner of Medicine than Yellow fever. It is interesting to all & of the greatest importance to such of the profession as are located in the Southern sections of our Union because of the liability of those sections to its invasions. A vast variety of theories have from time to time been proposed, all of which, altho strongly advocated for a time, have shared the same fate. The most popular of these theories seems to have been that Yellow fever was identical with intermittent & remittent fever, differing only in degree — The attack is usually sudden, a person in good health may be employed in his usual occupation & in two hours you may find him with high fever and all the symptoms of the disease — This is not always the case Occasionally the accès is preceded for several days by various evidences of derangement

of health, as slight pains or rearings of the head, chillines or loss of appetite, oppression of stomach &c Like all febrile diseases, this is ushered in by chill of longer or shorter duration almost invariably. the chill is rarely repeated. When this does happen it is not at regular periods, as in all other acute diseases. the chill is followed immediately by feverish heat of the skin, this heat is not however very intense according to most writers, though in this there is difference of opinion the most careful observers state that in every grade of severity of the disease, the temperature of the surface was but slightly elevated & in many cases quite natural, the skin is mostly dry, but sometimes there are sweats. Yellowness of the surface is very common in very grave cases. though this too is occasionally wanting even in fatal cases. This yellowness of the skin which

is more apparent on the chest than on other parts of the body does not show itself but rarely before the third day of the fever & most commonly from the fifth to the seventh day - Louis has remarked that in ten out of fourteen cases it occurred only on the last day of life in mild cases it is rare - The pulse is described as being generally full & corded & frequent but less frequent than in typhoid or typhus fevers, & even in fatal cases it is often found but moderately accelerated, rarely as high as 100 & often not over 80 or 90 - In those who recovered it was still less frequent & became slower as the disease progressed towards recovery The other characters of the pulse were various, as in cases that recovered it was observed as generally hard & full, the same was also noticed in fatal

cases sometimes & at others it was small & tense or full & soft — Pain in the head is an invariable & prominent symptom it is acute & severe. most writers mention this as one of the earliest symptoms experienced & commonly continues during a good portion of the disease at least the first half & in some cases persists to the close — Pains in the back & limbs, in the loins & joints are also present in the early periods, gradually disappearing as the disease progresses — The latter periods of severe cases are marked by extreme restlessness & anxiety, the patients are constantly tossing themselves about in their beds, walking from one bed to another, changing their position in the vain hope to get relief from their insupportable distress — In mild cases this is not

do — The mind in a majority of cases is clear to the last. delirium is not of frequent occurrence & confined to the last hours of life, in those who recover it is a rare symptom & hence as a prognostic of much importance, there is almost always disturbed & imperfect sleep — The expression of the countenance is usually altered, anxious or indifferent or stupid The face is suffused, the eyes are red, muddy, dull, glassy, injected This appearance of the eyes has been noticed by all who have carefully described the disease as constant in all cases both mild & severe & esteemed as a diagnostic symptom of much value, it is also an early symptom, being manifest on the first day, often a few hours after the attack — The loss of muscular

strength is sometimes very great, but in many instances. its preservation to the last moments is a remarkable feature, Dr. Potter mentioned in his lectures two sailors whom he found a few hours before their death sitting on their bed sides spitting black vomit for a wager. The tongue is generally covered with a white, moist, villous coat, its edges red, in some cases it becomes red & glossy in a few days, and towards the close dry & brown or black. The teeth & lips are often covered with a dry crust of blood. Dr Rush & others mention hemorrhages from the gums bowels &c as a frequent occurrence Thirst is a variable symptom sometimes cool drinks are greatly desired & at other times there is no

disease at all — The gastric symptoms are very constant. Vomiting is almost always invariably present, sometimes commencing on the first day but more frequently from the second to the fifth. And in fatal cases continueing to the close of life. The matter discharged from the stomach is peculiar in fatal cases. In the milder it is described as yellowish or greenish, whilst in those who die it is at first clear. Then more or less yellowish & finally black constituting the much dreaded black vomit — The vomiting of this black matter does not usually come on until the last days of the disease & is considered a most unfavourable symptom but few recovering after its occurrence Diarrhea is rarely present. The

bowels being mostly constipated
the discharges being of a brownish
or blackish colour in a majority
of cases. The epigastrium is som-
etimes the seat of tenderness and
pain. The urine does not present
any constant & important chan
ge — The most accurate & full
investigations of the conditions of
the organs after death, was made
by Louis at Gibraltar in 1828
he it is true described a particular
epidemic & other epidemics may
not present the same lesions which
he so accurately portrays. but
until we are in possession of
more facts carefully & analytically
collected we must take his con
clusions as provisional but not
final. The yellowness of the skin
is a common but not invariable

symptom, continueces very manyfest
after death, & when not well marked
it was more manyfest on the trunk
than the limbs. The central organs
of the circulation presented no
important alteration, except
flaccidity & softening of the heart
in a majority of cases. The lungs
were in many cases the seat of
peculiar morbid appearances
viz black spots of from 2 to 5 lines
in diameter, or masses of the
same color impermeable to the
air. they would be easily broken
down & in some cases yielded
blood to pressure & left the structure
of the lungs apparently of its na-
tural consistance. The cortical
substance of the brain was of
a pale red or violet colour, in
a proportion of cases the Medulla

substance was healthy, these with slight lesions in the spinal canal cannot be considered peculiar to this disease - The morbid appearances found in the abdominal cavity are very important and in many respects characteristic of this disease - The stomach always contained a blackish or black fluid deeply tinged with a red colour. This liquid was the matter of black vomit its quality was variable was considered the product of a peculiar secretory irritation of the mucous membrane of the stomach, often associated with inflammation but not necessarily dependant upon this process the mucous membrane was changed in nearly all the cases

its colour was reddened in most
cases, the thickness of the membrane
was either increased or diminished
but in a majority of the cases was
commonly increased, The consistence
of the gastric mucous membrane
was mostly diminished, This softening
was sometimes general, sometimes
partial, but never so great as to
make the membrane pulpy, Most
of these changes might be considered
the result of inflammation — The
duodenum presented evidences
of previous inflammation, but
not so frequent or positive as the
stomach, the small & large intes-
tines contained frequently the same
reddish black or black liquid
that existed in the stomach —
The liver was always the seat of
a peculiar lesion, consisting of

in a striking alteration of colour,
this colour is described as that of
fresh butter, sometimes that of straw
sometimes that of coffee & milk,
mustard colour, colour of dole
leather, or orange colour - This
colour occupied the whole substance of the liver, but was more
marked in the left than the right
lobe - The liver was also pale
& dry & did not contain its usual
quantity of blood, this colour of
the liver was also noticed by
Dr Chesholm in 1793. in the West
Indies, as also by others, and
considered an essential patho-
logical characteristic of yellow
fever - This may be premature
& future observers may find this
condition in other fevers, particularly in high Southern latitudes

this is rendered probable from the observations of Dr J. C. Nott of Mobile during an epidemic of 1843, in which 2 only of 8 cases presented the description given by Louis, the other six were dark blue or chocolate, & instead of being dry was excessively gorged with blood — Though there is much similarity between remittent and Yellow fever & probably no distinction which may be considered truly pathognomic of either disease yet taken as a whole they present so many & striking differences in their course, the type of fever & locality where they are met with that we are almost induced to believe them essentially distinct diseases Yellow fever is only found in this country at least in large cities

on the sea coast, or great rivers of the South. Whilst the interior has entire exemption from it. even where remittents & intermittents prevail to a fearful extent. The distinctly between these affections was noticed by Dr Mr Currie of Philadelphia in the epidemic of 1798 ——

Contagion has been considered by many a cause of this disease but has never been proven - there is but little doubt that the poison whatever it may be, is conveyed from place to place in the close holds of vessels & in close chests of clothes,

The records of medicine afford but doubtful evidence of our curative means in the graver cases of this disease. Notwithstanding the most judiciously applied resources of our art - the march

of the disease is onward & the system is so soon overpowered by the noxious operation of the poison, that indeed the patient from the very beginning may be said to be struck with death but in the milder forms of the disease much may be done by a judicious application of therapeutic means to conduct the disease to a favourable termination — Blood letting has been very generally recommended & many of its advocates placed more reliance on this means than is now thought to be justified by the pathological conditions made after death. When reaction is violent with a bounding corded pulse blood letting judiciously applied is certainly useful, but great caution is required lest a condition of prostration be induced

from which we shall not be able to
recover our patient, when we find
the pulse to give way, the operation
should be stopped, no matter how
small the quantity of blood taken
we should never forget that in
the course of this disease a time
may arrive when our patient
will require all the strength he
can command to enable the sys-
tem to go on to recovery — Large
& efficient doses of calomel has
been long & much praised as an
efficient agent in the management
of Yellow fever, it having been
advocated by many that some
derangement of the liver exists
which could only be controlled
by this, as they believed, a specific
agent in all morbid conditions
of this viscus. If in any disease

the stools presented the appearance of either redundancy or deficiency of bile, calomel was the remedy, the efficacy of its administration measured not by results, but by the quantity given — What calomel is useful under judicious management we cannot deny, but in this disease we are disposed to believe its chief virtues depends upon its purgative property & not upon any specific action it exerts on the liver or any other organ — When there is much dryness or heat of surface, sponging the body with cool water or vinegar and water — the frequent ablution of the hands & face with cool water are productive

of comfort— Cool drinks in small quantities not disposed to oppress or disturb the Stomach or small pieces of ice permitted to dissolve slowly in the mouth,

Until future observations shall more clearly point out the proper remedies. the treatment in all the severer cases must be directed by the good judgment of the physician ———

An

Inaugural Dissertation

on

"Pneumonia"

Submitted to the examination of the

Provost, Regents & Faculty of Physic

of the

University of Maryland,

for the

degree of Doctor of Medicine

by Upton H. Berryman

Baltimore—

Dedicated

to

Dr Wm Power

Physician of the Baltimore Alms House,

as a small tribute of esteem for the

invaluable assistance rendered in the

pursuit of medical knowledge,

by his friend, the

Author.

The following cases of Pneumonia were observed at the Baltimore Alms House in the fall & winter of 1845 in the wards of Dr Power who enjoys a very high reputation for Physical diagnosis of diseases of the chest. The notes were taken at the bed side at short intervals & subject to the intermediate corrections of the Physician in his daily visit, thereby preventing any misapprehension of the memory, & removing the errors depending on an incomplete & false observation. Believing them to have been faithfully noted they are here presented as so many portraits of a disease to which every one is more or less liable, & which from the vital importance of the organs which are its seat, will ever command the highest consideration of every intelligent Physician—

Henry Saunders, aged 37, a robust German of temperate habits has been in this country 7 years—the first two of which he spent on the Chesapeake & Ohio Canal, & the remainder at the iron mine Banks

on the Washington Road. For the first 3 years of his residence at the Ore Banks, each summer he had an attack of Intermittent Fever that lasted from five to nine weeks. And during the last two years has escaped the fever until eight weeks since, when he was attacked by remittent that yielded to Sulph. Quinine in the course of six or seven days. Since then he has been perfectly well & at work until the 8th inst., when the day previous having got his feet wet, he felt chilly but continued at his work, having but little appetite. On the morning of 9th he awoke with violent cephalalgia, fever, thirst, dyspnœa, & entire loss of appetite. At night he had a sharp pain in the Rt side, soreness in all parts of the body, & a cough without any expectoration, has had no nausea or vomiting - Remained in bed all day & was prevented from sleeping at nights by biting thirst & headache. On 10th he had an acute pain in Rt. side, with increased cough & a scanty, viscid expectoration of a dark red color. His bowels though regular were freely opened by Calomel, jalap & rib, & a blister 6X4 put over the seat of pain, which

drew well & somewhat alleviated it. He was prevented from sleeping by the same cause as last night. On 11th continued in the same condition. On 12th he felt pain in the Rt. side only when he coughed or took a full inspiration. Cough & expectoration the same. has had two or three natural stools. On 13th he was brought to the Alms House in a carriage & with assistance walked up three flights of steps into the hospital. At present I see him, he is in the following condition. Lies on his back, skin moist & of moderate temperature. Blistered surface healing. Flush on both cheeks, but the greater on the left. Mucous membrane of Lft. side of neck. Intelligence perfect. Cough troublesome with very scanty tenacious pink sputa. Great headache & urgent thirst. Pain in Rt. side only on motion. Slight pain over spleen which extends about three inches above & below the false ribs & is two & a half inches wide. Abdomen somewhat tympanitic. Tongue moist, red at tip & edges & slightly furred posteriorly. Pulse 118 moderately hard & full. Respirations 32 & audible, breathes with mouth closed. Physical Signs. Normal res-

-nance on percussion, throughout the whole of the left lung with a hypervesicular murmur, and a subcrepitant rale at its base. Loud resonance under the clavicle of the right side, & for 2½ inches in width along the sternum. Over the remainder of this side in front, bronchial respiration & broncophony with a crepitant & subcrepitant rale. These signs were also heard from a line half an inch above the spine of scapula to the base of the lung. V.S. ℥xxxij in a recumbent position. Soon after the bronchial respiration was diminished in intensity. Ordered Tart. Antim & Potass. gr viij - Tr. Opii ℥i. Muc. G. Acac. ℥iv Tablespoonful every 2 hours -

9. P.M. Says he feels better but complains of weakness Pulse 120 moderately full & soft. Respirations 28 & easy - Skin of natural temperature & bathed in perspiration In other respects the same.

Oct. 14th 10 A.M. } Slept tolerably well last night, had four loose stools. No flush on either cheek, expression of face brighter; tongue inclined to be dry, red at tip & edges with a brownish coat in centre. Lips moist, skin cool. Cough infrequent, expectoration unaltered.

Pain in side when he coughs or takes a full inspiration
Pulse 100 full & soft. Respirations 24 easy - Blood present
a fibrino clot, cupped & baffed floating in a yellowish pus
serum. Phys. Signs. Bronchial respiration heard
principally over the middle third of posterior sur-
face of Rt. lung. Crepitant & Subcrepitant rales much
more abundant and extending over the same limits as
last night -
4 P.M. Respirations 32 & audible. Pulse 106 full & soft.
Skin very warm & dry -
8 P.M. Says he feels pretty well, has slept all this
afternoon. Pulse 102 moderately full & soft. Respirations
20 and audible. Has taken medicine during the day time reg-
ularly since entrance without nausea or vomiting. One stool
since morning. Has been quiet all day until the last half
hour, when the nurse reported that he was a little bewildered
& fancies that he is at the mine Banks and talks about
the things he has seen there. After talking to him a few
moments he was made sensible of his real situation
& replied rationally & correctly to all the questions pro-
-pounded. Thirst considerable. Cough infrequent,

Expectoration the same. Body warm & dry, tongue
dry & coated centrally. Phys. Signs. the same in front &
laterally. Less of the crepitant & subcrepitant rales near
the scapulæ with some extension of the bronchial respir-
ation & bronchophony. The rales in the lower half of the
chest finer & dryer with slight bronchial respiration -
P. S. Zxviij- Pulse was slightly increased in frequency &
became much softer.

Feb. 15th } Complains of debility. Skin pleasantly warm.
P. M. } Tongue moist & covered with a white fur. Looks
a little dejected. No stool since last night. The blood
drawn yesterday presented a firm clot, buffed &
cupped, the fibrine being about two lines in thickness
Phys. Signs unaltered -

16 P. M. Says he feels "Good". Skin moist & of a pleas-
ant temperature. Resp. 16 & easy. Pulse 64 moderately
full & soft. Bowels not moved today.

Feb. 16 } Says he feels better, skin natural, tongue moist &
P. M. } clean. No pain, some appetite. Bowels not
moved. Cough infrequent, sputa scanty & consisting
principally of bronchial mucus. Pulse do, moderately

full & soft. Resp. 16 & easy. Physical signs very much improved. The bronchial respiration with a returning crepitant rale confined to a space two inches square about the scapula & the crepitant & subcrepitant rales coarser with some vesicular murmur over the remainder of the diseased portion of Rt. lung.

Feb. 19th 11½ A.M. } Sleeps well at nights. Tongue moist & slightly furred. Appetite pretty good. No thirst, very little cough & no expectoration. Has had no stool for four days. Pulse 90 full & soft. Resp. 20 & easy. Ord. Sulph. Magnes. ℥ij Phys. Signs. Bronchial respiration heard only at root of lungs. A coarse crepitant & subcrepitant rale with vesicular murmur & some dulness on percussion over the posterior half of Rt. lung.

Feb. 20 11 A.M. } Has improved very much in the last few days. Still some bronchial respiration & a subcrepitant rale at the root of lungs. R subcrepitant rale along the spine & base of the lung. In the course of ten days bronchial respiration was succeeded

succeeded by a moist crepitant rale which gradually yielded to the returning healthy vesicular murmur & all traces of disease entirely disappeared.

This case commenced in a very frank manner, namely, with a chill followed by fever, thirst, pain in the head & side, soreness in the limbs, dyspnœa cough &c & on the second day there was expectoration of a viscid transparent red fluid. These symptoms alone would have rendered it probable that the patient had pleuropneumonia. For although all the above symptoms excepting the sputa may attend a case of pleurodynia, & even this has been denied by Andral, yet when taken in connection with the expectoration would have rendered the diagnosis of pleuropneumonia almost certain, without considering any of the physical signs. For capillary bronchitis is the only other disease in which this sputa occurs & then it is an exception to the rule, & when we reflect on the frequency of pleurisy complicating pneumonia, the diagnosis would have been rendered an almost absolute certainty

But this could not have been recognised as a case of Pleuro pneumania or a blister would not have been applied in the acute stage risking the probability of increasing the already extensive inflammation: or we must suppose the physician deficient in the principles of therapeutics. We are loath to believe either, but on carefully considering the condition of the patient as he entered the hospital on the fifth day of the disease both points force themselves upon us. However lets us say that that the case was one of very difficult diagnosis when the above named symptoms alone were examined, yet the physical signs ought to have dispelled each fancied difficulty that the doctors imagination might have conjured up to frighten his exhausted genius. The patient however informed us that his physician had told him he had Bilious fever, but most woefully was he mistaken in his diagnosis, and so ill adapted to the three diseases mentioned were the therapeutical exhibitions that we are compelled to think the man a libel on

the profession & a medical scourge & society. Now as the case is one of well marked pleuropneumonia let us consider those symptoms that are worthy of notice. Firstly the man was exposed to cold & dampness the most common cause of pleuropneumonia uncomplicated. Secondly it commenced with a chill followed by severe sharp pain in the Right side increased by all kinds of motion. Now if there had been pneumonia alone this sharp pain would have been supplanted by a sensation of uneasiness, tightness & a feeling of oppression along the sternum. Hence according to the observation of Andral in all the autopsies of pneumonicos made by him, where this sharp pain was observed during life, he discovered inflammation of the pleura, but the reverse was not the case, for pleurisy does sometimes exist without any painful symptoms. The cough was first observed on the second day of the disease without any expectoration, which is usual, but on the third day the characteristic

sputa of pneumania appeared which indicates in some measure the intensity of the inflammation for in the beginning of mild cases the expectoration is bronchial mucus of moderate consistence, and as the disease advances it increases in tenacity & assumes one of the shades of red. The color of the sputa is owing to the intimate admixture of white mucus with blood, & the color may vary from a dark reddish brown to the slightest tinge according to the relative quantity of blood in combination. The respiration in general bears a direct proportion to the extent of the inflammation & frequency of the pulse & in this instance throughout the whole course of the disease maintained the same relative proportion that it does in health, namely as 1 to 4 or 5. Sudamina were observed on 5th day of the disease, when the body was fully moistened with perspiration, in their most usual seat, the side of the neck. This eruption according to Louis & Chomel is very common in the advanced stages of typhoid fever, but very unusual in other diseases, but Dr Hale is of a different opinion, who says "when

—over

wherever the skin is for a length of time kept in a state of perspiration from whatever cause, there, sudamina will generally be found. The observation of the last mentioned gentleman has been confirmed at Baltimore. Thus in the case of Pneumonia & Remittent Fever where there was a strong tendency to perspiration - But what is most remarkable in this case is the close relation the physical signs bore to the rational symptoms. Any appreciable change in the former was responded to by a corresponding change in the latter. For instance the case from the time that it was put on rational treatment steadily progressed to a favourable termination until the 5th day when an exacerbation of the general symptoms prompted a careful examination of the chest, There was found an ample cause for the aggravated symptoms, the disease had extended, the bronchial respiration was heard over a greater space & with an increase in the fineness of the crepitant rale, the bronchial respiration had in a degree returned to its old seat. But these unfavourable symptoms were considerably mitigated by timely evacuations.

Here phlebotomy as it had previously done acted very energetically, the inflammation which twelve hours before seemed to be resolving itself, again as it were broke loose from its trammels, & would in a short time have involved the whole lung had not this most efficient measure been so opportunely applied. On the 5th day of the disease this measure was also resorted to with the most signal benefit. Under its influence the bronchial respiration diminished in intensity & the sonorousness of the chest increased. This perhaps was owing to the relief of the engorged vessels, thereby diminishing the secretion, & to the impulse given to the venous & lymphatic absorption. The blood drawn presented the following characters, viz:- the clot was buffed, firm, capped & floating in yellowish green serum. This is generally the appearance of the blood in inflammation & the thickness of the buffy coat bears a direct relation to the extent & intensity of the inflammation. However all these characters may be assimilated by a very different state of the blood, viz: by Anemia in which the fibrine remains unchanged, the red globules being diminished

thereby putting the components of the blood relatively in the same condition as in inflammation for the production of this phenamenon. These two states of the blood were confounded until near the middle of the 19th century when the immortal Andral made known to the world the results of his investigations in Pathological Hæmatology. And the mode used was so easy & complete, that while struck with admiration for the man, we wonder that this channel of medical enlightenment, should have been left untouched until the present era. Now the symptoms accompanying these two diseases although generally very dissimilar, sometimes so nearly resemble each other, that an incautious observer will be very readily mistaken, & in applying the primo remedy of inflammation, bloodletting to anæmia, he will increase the disease, for it consists in the red globules being below the standard of health, and there is no more powerful cause of this state than excessive hæmorrhage. But to return to the treatment, the Antimony & Ł Opii had a powerful influence on the disease. The latter was given to allay irritation & to promote the retention of the Antimony, & so powerful were its influences that although commencing with one gr. dose it

thereby putting the components of the blood relatively in the same condition as in inflammation for the production of the phenomena. These two states of the blood were confounded until near the middle of the 19th century when the immortal Andral made known to the world the results of his investigations in Pathological Hematology. And the mode used was so easy & complete, that while struck with admiration for the man, we wonder that this channel of medical improvement, should have been left untouched until the present era. Now the symptoms accompanying these two diseases although generally very dissimilar, sometimes so nearly resemble each other, that an incautious observer will be very readily mistaken, & in applying the prime remedy of inflammation, bloodletting to anemia, he will increase the disease, for it consists in the red globules being below the standard of health; and there is no more powerful cause of this state than excessive hemorrhage. But to return to the treatment, the Antimony & R Opii had a powerful influence on the disease. The latter was given to allay irritation & to promote the retention of the Antimony, & so powerful were its influences that although commencing with one gr. dose it

scarcely produced any nausea. During the daytime these remedies were regularly administered & the pulse, respiration, heat of skin &c. at night were improved but in the morning the tartar emetic having been more or less entirely emitted during the night, they would rally until the system was again brought under the influence of the medicine.

Case II. Pleuro pneumonia —

1845.
Nov. 26th 9½ A.M. } Sarah Chunn age 20, a housemaid of temperate habits, & nervous temperament enjoyed excellent health until last July when she had an attack of Rubeola that confined her to the house about a week. The cough left her about three weeks after the eruption. She has never had any habitual cough, & never lost any relations of Phthisis. Her catamenia have continued up to the present attack. On Nov. 20th while washing some clothes felt chilly all the morning & pains in all her limbs, but no headache, nausea, nor vomiting; loss of appetite, great thirst, heat of skin & profuse sweating — Sharp pain in Rt. side extending to shoulder & increased by all

kinds of motion. At night had cough without expectora-
-tion. Bowels regular. Was obliged to go to bed & has kept
it ever since. The next day vomited everything she took
except cold water. Sometimes she would retch even up-
-on rising in bed. Has had a mustard plaster & two
blisters over the seat of pain; these she thinks increased
it. Has taken calomel & purgative medicines & also
some diaphoretic teas. Has lost a great deal of rest.
Was brought to the Balto. Alms House in a carriage
on the afternoon of the 20th inst. in so weak & emaciated
a condition that it was necessary to carry her into the
hospital. Pulse on the evening of entrance at 8 O'clk.
136 moderately full & rapid but compressible. Resp. 36
& audible. V.S. ℥xiv in a sitting posture. Pulse &
respirations afterwards improved & she said she felt
better. Phys. Signs. Rt. lung. Anterior surf. Exagge-
-rated respiration over the upper third & over the re-
-mainder a sub crep. rale with vesicular murmur.
Posterior Surface. Pure bronchial resp. over the up-
-per third, bronchial resp & crep. rale over the mid-
-dle & a coarse crepitant rale with vesicular murmur

over the lower third. ℞. Antim. Tartar. gr viij. Tr. Opii ʒi. Muc. G. Acac. ʒiv-m S. Tablespoonful every 2 hours - During the night took three doses of medicine. The first two were followed by some nausea the last by none. She is at present in the following condition - Lies on her right side, but from choice. Face very pale excepting a flush over the Rt. cheek bone. Intelligence perfect. Tongue moist & covered with a thick brown coat. Face & arms cool & dry, the rest of body warm & moist. Cough rather troublesome with very scanty tenaceous pink sputa. Pain in Rt side only when she moves or coughs. P. 129 moderately full & soft. Resp. 39 & easy. One thin stool since entrance. Blood but slightly buffed & not cupped. Clot will bear its own weight.

6.40" P.M. Some flush on lft. cheek more on the Rt. Tongue inclined to be dry. Breathes with mouth partially open. Some sordes on exposed teeth. Cough not so frequent, expectoration of the same character. Only about ʒß since morning - One stool. P. 117 moderately full rapid & compressible. Resp. 31 & easy.

says she feels better & not so weak.

Nov. 27. Rested pretty well last night but talked a little in her sleep. Says she feels better has no pain. Cough infrequent, without expectoration. Tongue covered with a dry brown coat. Very slight flush on either cheek. Thirst urgent, no appetite. P. 105 full & soft. Resp. 27 & easy. Body warm & dry. V. S. ℥xiv in a sitting posture. The pulse rose 2 or 3 beats. Clot firm buffed & cupped, floating in serum of a yellowish green color. Phys. Signs. An occasional sub-crepitant rale over the upper third of posterior surface of Rt. lung. Bronch. resp. without any rale in the middle third, other parts in the same condition.

8. P. M. P. 112 full & soft. Resp. about the same. Tongue moist. Her condition in general has improved.

Nov. 28. P. 97. full & soft. Resp. 19. breathes with mouth closed, no sordes on teeth, no pain. Expression of face brighter. Cough a little troublesome. Expectoration scanty & bronchial. Tongue moist

& not so thickly coated. P. Signs. Râle C. in axilla more abundant & extending in front.

Nov. 29 } Slept tolerably well last night. Countenance
10½ A.M. } brighter. Tongue just moist, with some coat. Intelligence good. P. 90 full & soft. Resp. 24 & easy. Cough infrequent without any expectoration. At night had vomiting. with increased heat of skin & thirst. P. 120 full & somewhat. Resp. 30.

Nov. 30th. } Resp. & pulse about the same. Tongue
9½ A.M. } parched, skin hot, cough more trouble-some without any expectoration. P. Signs - Crep. râle in axilla nearly supplanted by bronchial resp. Condition of other parts about the same. P. S. Zx. Pulse increased in frequency & softer. At night. P. 117 full & soft. Resp. 26. Tongue moist but thickly coated yellowish brown. Skin of moderate temp. & over the forehead moist.

Dec. 1st. Resp. 27 & easy. P. 111 full & soft. Body warm & dry. Tongue moist only to the touch & rough. Lies on Rt. side, flush on both cheeks

but greater on the Rt.

9. P. 116, P. 126 full & soft. Skin warm & dry - Tongue just moist & coated brown. An occasional cough with very scanty sputa. Resp. 26 & audible. breathes with mouth closed. Has been nauseated all day -

Dec. 2nd 2. 45 P. M. P. 124. Resp. 34.

7. 20. P. 116. P. 126. full & compressible. Resp. 30 & easy Tongue moist & thickly coated. Cough very infre- quent & expectoration scanty. Medicine & water both cause retching. Bowels voluble.

Dec. 3rd. Slept tolerably well last night. Expres- sion of face brighter. Sinapisms applied over those points where the disease was the greatest. P. 118 moderately full & soft. Resp. 19. R. Signs - The upper lobe of Rt. lung has nearly returned to a state of health. Vesicular murmur with a moist crepitant rale heard there, the former pre- dominating. Some vesicular murmur with the bronchial respiration & crepitant râle over the middle lobe both in front & behind. & also over the lobe of the Rt. lung, the vesicular murmur being

more free in the last portion — Over the whole of the left lung more or less sub crepitant rale with supplementary respiration —

9. P.M., P. 13 c full & soft. Resp. 19 & irregular. Tongue just moist. Any motion of body causes retching — Last night commenced taking stimuli; Antim & Tr. Opii diminished by one half. Body warm & dry —

Dec. 4th. } Her sleep last night was very much
9½ A.M. } disturbed by dreams. Could not retain the antim, perspired freely. Last night & the night before talked considerably in her sleep. She now lies on her Rt. side, Erysipelas on the Rt. ala nasi. Skin of body rather warmer than natural & dry — Lips dry & scaly — Feels very weak of which her countenance is very expressive. Tongue moist, red round the tip & edges & coated in the centre. Lymph on the soft palate, tonsils & fauces. Has difficult & painful deglutition & complains of external pressure. Cough infrequent Expectoration scanty, frothy & tenaceous & of a yellowish green color. Thirst urgent. One

thin sheet Cash night - P. 124, moderately full & compressible. Resp. 24. & easy, breathes with mouth closed. Some little subsultus can be felt at her wrists.

7. 45" P. M. P. 134 quick, small, & compressible - Resp. 24. & audible, breathes with mouth partially open. Lies on her back inclining to left side Face covered with a warm & profuse perspiration & flush on either cheek. Erysipelas extending up to the Rt. eye, & over the left side of nose. Its borders are abrupt & the complains of soreness & smarting in it. Lips dry & much cleaner. Very little sordes on teeth. Tongue moist & covered with a thin white coat. Skin of body warm & moist. Answers rationally when spoken to but when left to herself is a little delirious. Cough infrequent, expectoration scanty, frothy & colorless - Says she feels better -

Dec. 6th 4 A. M. In the fore part of night she lay tolerably quiet but did not sleep. Was somewhat delirious. At 2 A. M. she had a time

delirious the nurse called with difficulty kept her in bed. Has taken nothing since 3 P.M. At present cold clammy perspiration on face & hands, feet cold. Does not recognize anyone. Features haggard & sunken, Erysipelas almost imperceptible. Resp. 42 & sighing. Pulse just perceptible at wrist cannot be counted. She died at 10 A.M.

Autopsy 4 hours after death.

Body moderately emaciated with slight injection of depending portions. Limbs rigid. A slight blush marking the outline of the erysipelas. Straw-colored lymph of some firmness scattered in spots over the face & the commencement of the oesophagus. Its mucous lining injected but without ulceration. Some thickening & edema of the Rt. border of the epiglottis, & the corresponding vocal cord without any injection. The remainder of the larynx healthy. Chest. The lower two thirds of Rt. pleura injected

& more or less covered with false membranes, the remainder colorless. No fluids in its cavity. The Lung corresponding with the diseased pleura of a dark red color, less crepitous than normal, some points being solid & entirely free from it but of good consistence. Very little bloody serum oozed from the cut surfaces. The bronchial tubes of an intense red & containing some red frothy fluid. Left Pleura healthy. Lung in depending portions congested, the bronchi reddened & moistened with red mucous. Abdomen. Peritoneum healthy. Stomach normal with the exception of some softening of mucous membrane in lowest portions of great Cul-de-sac. Liver Spleen & kidneys engorged with blood. Other parts not examined—

This case was not as easy of diagnosis as the former one. The general appearance of the patients, the great emaciation, the thin pale lips, the sunken & dreary eyes surrounded by dark areola, & the waxen countenance, with the deep hollow cough all seemed

to point to this case as one of undoubted phthisis & this was the diagnosis of the physician in the city. But it was not confirmed by the history of the case. She was naturally thin & delicate & although taking cold easily never had any habitual cough. Her catamenia had also been regular, & none of her relations had ever died of Phthisis. These symptoms alone should make one hesitate in pronouncing an opinion on this case, & endeavour to elicit new lights to assist his judment in forming a correct decision. It has been asserted by Andral, that the tuberculous diathesis cannot be acquired, & this is not an idle opinion, but one based on facts observed with the keenest scrutiny. A cessation of the catamenia is also one of the first indications of tubercular cachexia. Her recent history also was incompatible with that of Phthisis if we consider that there was no ~~hereditary~~ tuberculous predisposition. The physical signs again solved the doubt. The greater portion of the right lung was found in a state of acute inflammation, the two upper lobes gave all the evidences of pneumonia

in the first & second stages, a portion of the lobes to be being in the first stage. And her expectoration was so scanty as to be almost overlooked. Now there have been instances of Phthisis in which the cough has not been observed until a few days before the physical signs have ~~discovered~~ indicated a cavity but then the expectoration has been characteristic of tubercular deposition, & accompanied with hectic fever. The catamenia were also suppressed. The post mortem verified the diagnosis, not one tubercle was found, the diseased lung was rapidly returning to health & resuming its functions when the erysipelas attacking the face & throat produced all those cerebral symptoms which ended only with her life.

Upton H. Bowman

An

Inaugural Dissertation

On Calomel

Its History Properties and Uses

Submitted to the examination of the

Provost Regents and Faculty of Physic

of the

University of Maryland

For the degree of Doctor of Medicine

by

Wm Holloway

Protochloride of Mercury

Calomel

Began in 1608 and Ovala Cole in 1609 are the first Europeans who mention this compound. Mr Hatchett (Brandes Manual of Pharmacy) says it had been long known to the Natives of Thibet. Its discovery is unknown. It has had a great variety of names. Draco Mitigatus, Aquilla Alba, Mana Metallorum, and Panchymagogum Mineral, have been some of the appelations for it. Mercurius dulcis, Hydrargyrum Muriaticum Mite, Submuriate of Mercury, and Subchloride, Protochloride, or Dichloride of Mercury are some of the more Modern Synonymes of it.

Native Calomel or Corneous Mercury occurs in crusts and also crystalised in four sided prisms terminated by pyramids. It is found at Deux-Ponts, Carniola, and in Spain There are many formula for preparing this

compound but the following is order by the London College and has adopted by the United States Pharmacopea

℞ Mercury Purg. lbiv
Sulphuric Acid lbij
Chloride Sodium lbij
Distilled Water 2.S.

Boil two pounds of the Mercury with the Sulphuric acid in a proper Vessel until the Bisulphate of Mercury that is formed remains dry But this When it is cold with the remaining two pounds of Mercury in an earthen Mortar that it may be perfectly mixed Afterwards add the Chloride of Sodium and put them together until the globules are no longer visible then Sublime. Put the Sublimate to fine powder, and Wash it carefully with boiling distilled Water and dry it, Mr Jewell's prompt is to Sublime it over Water in contact with Steam Which makes a finer and more beautiful preparation.

In the first Stage of this process one equivalent or 202 parts of Mercury decompose two equivalents or 80 parts of dry Sulphuric acid and

abstracting two equivalents or 16 parts of oxygen to form one equivalent or 218 parts of binoxide of Mercury disengage two equivalents or 64 parts of Sulphurous Acid. The binoxide combines with two equivalents or 80 parts of undecomposed Sulphuric Acid, and forms one equivalent or 298 parts of bisulphate of Mercury. If one equivalent or 298 parts of bisulphate one equivalent or 202 parts Rectified Mercury and two equivalents of 120 parts of Chloride of Sodium be intimately mixed and continued fusion takes place and be obtained two equivalents or 476 parts Chloride of Mercury and two equivalents or 44 parts Sulphate of Soda

Calomel as met with in the Shops is a fine tasteless colourless powder of the Specific gravity 7.176 It sublimises by heat and melts when fuses It is insoluable in Cold Water or Alcohol but suffers slight decomposition by long boiling in Water. By exposure to light and air it becomes coloured in consequence of its parting with a portion of its Chlorine and the formation of a Sub-Chloride. Boiling Sulphuric Acid forms

. bi persulphate and bichloride of Mercury With the solution of sulphurous acid. With caustic potash or Soda calomel yields a grey or black precipitate (oxide of Mercury) and With iodide of potassium a greenish or Yellow precipitate (iodide of Mercury) Calomel When pure is completely vaporized by heat Water or Alcohol When digested on it should occasion no precipitate or change of colour on the addition of limewater caustic potash Ammonia Nitrate of Silver or hydrosulphuric acid, by Which the presence of bichloride may be detected. Calomel is one of the Mildest and most certain of all the Mercurials preparations in its operation on the System It is the Mercurial that is generaly used in all diseases When Mercury is given In small doses of a few grains it occasionally excites no obvious effect though when commonly it acts as a purgative and in some very Susceptible persons especially females it sometimes produces Nausea griping and great faintness Indeed the idiosyncrasy of some constitutions

~~it is~~ prohibits its administration even in the smallest dose for cases are on record of the most violent and even fatal ptyalism ~~from~~ arising from the administration of only one grain. While on the other hand in this country particularly, large quantities of Calomel have been given medicinally without any unpleasant symptoms arising may apparently the opposite effect for we have the concurrent testimony of many practitioners that in yellow fever, cholera and other dangerous diseases calomel in simple doses and upwards always vomiting and purging and on this account has been denominated a Sedative So that while in small doses of from ½ to five grains Calomel is almost universally admitted to be an irritant to the bowels, it is apparent that larger ones are actually Sedative Inconsistent as this may appear yet it is a fair deduction from the experience of numerous intelligent practitioners

Calomel is very frequently used as an alterative in glandular affections chronic Skin diseases and disordered condition of the digestive organs more particularly in those cases connected with hepatic derangement. For this

purpose it is usually taken in combination with other alteratives as in the well known Plummers pills

As a Cathartic it is frequently employed though on account of the uncertainty of its operation it is seldom given alone but generally in combination with other drastic purgatives such as Jalap Scammony Colocynth and gamboge whose action it promotes

We employ it for this purpose when we are desirous of making a powerful impression on the alimentary canal to relieve affections of other organs on the principle of counter irritations Thus in threatened apoplexy in mental disorders in dropsical affections and in chronic diseases of the Skin In torpid conditions of the bowels when it is necessary to use powerful cathartics to produce alvine evacuations as in paralytic affections it is advantageously combined with other purgatives We use it to promote biliary secretions as in jaundice and other affections of the liver in chronic Skin diseases and in various disordered conditions of the alimentary canal not accompanied by inflammation

Mercury in the various diseases of children

beginning the use of purgatives it is generally considered to be very useful and its being devoid of taste is of course an advantage
As a Sialagogue (it may be used in combination with Opium to prevent its irritating the bowels unless the existance of some affection of the nervous System contraindicates the use of Narcotics) in peripneumonia, pleuritis, croup, laryngitis, hepatitis, cutitis, and other inflammatory diseases in fever, Syphilis. chronic Visceral diseases &c
Calomel is frequently combined with other Medicines to increase their effects With Squills to produce diuresis, in dropsy; or with Antimonials to produce diaphoresis
As an anthelmintic it is frequently used and forms one of the active ingredients of Many of the Nostrums Sold for Worms
The local uses of Calomel are numerous In diseases of the Schneiderian Membrane it is applied as a Snuff It is sometimes blown into the eye to remove Spots on the cornea It has been used with great Success in chronic cases of Rheumatic, catarrhal and Scrofulous Opthalmia; but in two instances bad consequences resulted from its use It is sometimes Suspended in thick Mucilage and used as a gargle in mercurial Sore throat or

injected into the system in Stomatitis.
In the form of Ointment, Calomel is one
of the most useful remedies we possess for
the cure of several forms of chronic Skin
diseases

Administration When used as an
alterative it is given in doses of from one
to two grains frequently combined with hy-
Sulphuret of Antimony (as Plummers Pill) or
Antimonial powder and repeated every or
every other night followed by a Saline
Purgative in the Morning As a purgative
from 5 to 10 grs combined with or followed
by some of the other purgatives as Aloes
Jalap Rhei &c As a Sialogogue it
is exhibited with Opium or Dovers powder three
or three a day in doses of one to three or four
grains As a Sedative in doses of a Scruple
to half a drachm or more As an Enema
it is mixed with some mint powder and used
to the extent of 10 to 20 grs daily

Calomel is much employed in diseases of
Children and may be given to them in Propor-
tionally larger doses than to adults. Salivation
is a less common with them

An
Inaugural Dissertation
On

Erysipelas

Submitted to the examination
of the
Provost, regents and faculty of Physic
of the
University of Maryland

for the
Degree of Doctor of Medicine

By John L. Hearn.
of
Maryland.

February 1846.

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Erysipelas.

According to the Cullenian system, erysipelas belongs to the same class (Pyrexiæ) and to the same order (exanthemata) to which small-pox, measles and scarlet-fever belong. Although this malady appears to have been noticed, centuries ago, by medical writers, yet at the present day, its true nature is not so well understood, as to free it from dispute, or to divest it of a mortality, not inconsiderable. The attention of medical men, seems to have been more especially directed, to the art of devising Nosological arrangements, or dividing diseases into a great

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many separate varieties; from which practice probably no disease has suffered more than erysipelas. It was in consideration of this evil, for such it must be called, that Dr Mackintosh was led to make the appropriate remark, that, "If all the time and talents that have been misused in devising nosological arrangements, had been employed in discovering the nature and seats of diseases, our knowledge of pathology and remedial agents would in all probability have been much further advanced than it is at present." It has been divided into the following varieties, viz: idiopathic, symptomatic, erythematic, phlegmonous, erratic, bilious, local, malignant and putrid; and some of these have been again subdivided. For all practical purposes, the division into erythematic and phlegmonoid,

would appear to be all that is required but according to late writers, the seeming difference between these, is merely a difference in severety and not in the nature of the disease. In the one, the skin alone is occupied by the disease and in the other, both the skin and cellular tissue beneath, are the seat of inflammation. In view of these facts, I shall in what follows, differ but little, from Dr Watson's plan of treating of erysipelas, and direct my remarks more especially to that form or variety "in which the integuments of the face and head become diffusely inflamed". It appears to me that all that applies to this variety, may as properly be applied to any other, let the attack be seated where it may. Dr Watson defines it to be "an idiopathic, inflammatory disorder

running a tolerably regular and definite course; attended by inflammation of the integuments of the body or in other words an eruption; often prevailing epidemically, and capable of being communicated under circumstances favourable to its propagation, from one person to another."*

Erysipelas is said to be a disease of all ages and of both sexes. It is seen in the infant almost as soon as it is ushered "into this breathing world" and it is seen in the old man who has lived out his three score years and ten; it is seen in the male and in the female, so that no class can be said to be secure from its attacks. It occurs under every degree of severity and under a great many seeming

*Dr Mackintosh denies its idiopathic nature altogether and says that he believes it to be an occasional symptom of different diseases, which diseases may frequently occur under atmospherical epidemical and contagious influences.

varieties, from a slight redness of the skin, to a severe inflammation of the integuments of the face and head, and sometimes of a large part of the surface of the body – nor does its severity stop here – even the cellular tissue between the muscles, is sometimes involved in the inflammation. When the deeper seated cellular tissue becomes the seat of this kind of inflammation, its termination by resolution, may generally be despaired of, and extensive suppuration, ulceration, mortification and sloughing of the parts looked for, unless surgical aid be immediately resorted to.

It usually sets in with a shivering followed by feverish heat, much in the same manner as most of the diseases of the same order, and it is not uncommon, for sporadic erysipelas, in mala-

varieties, from a slight redness of the skin, to a severe inflammation of the integuments of the face and head, and sometimes of a large part of the surface of the body — nor does its severity stop here — even the cellular tissue between the muscles, is sometimes involved in the inflammation. When the deeper seated cellular tissue becomes the seat of this kind of inflammation, its termination by resolution, may generally be despaired of, and extensive suppuration, ulceration, mortification and sloughing of the parts looked for, unless surgical aid be immediately resorted to.

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rious districts, to be treated for the bil-
ious remittent fevers, prevalent in such
sections, until the local symptoms
set in. The fever sometimes runs
very high and is attended with con-
fusion of the head, delirium, coma
and drowsiness. The pulse is comm-
only full and hard — always very fre-
quent. In the summer and fall sea-
sons, there is usually diarrhoea, nau-
sea, and vomiting of bilious matter.
There is pain in the back and loins
and in this respect also, bearing some
resemblance to other diseases of the
same order. After these symptoms
have existed for about three days,
more or less, the local symptoms
make their appearance, which
when they are fairly established
can scarcely be mistaken for any
thing else.

A redness and swelling are seen on some spot about the face or other part of the body, but usually about the root of the nose. The sensation in the part at this time is of a pricking or tingling character, but subsequently it is of a pungent burning. The redness and swelling gradually and sometimes rapidly extend themselves; they are defined by a distinct elevated margin which advances and invades progressively the neighbouring healthy surface until the whole of the face or scalp or both is occupied with the inflammation. The lips swell enormously the cheeks enlarge, the eyes are sealed up by their oedematous and prominent lids and all traces of the natural countenance are effaced. I know of no disease except perhaps the confluent small-pox, which so

completely and speedily deforms and disguises the visage of the patient. A stranger seeing a young female in the height of the disorder, and revisiting her after her recovery, is astonished at the change. It seems as if by some magic process, such as we read of in our nursery tales, a hideous monster has been metamorphosed into a comely damsel." The surface presents a glossy or shining appearance, is very tender to the touch and the pain is very much augmented, by any movement or disturbance of the patient. At the commencement - before the colour becomes deep or livid - the surface assumes a white appearance on pressure, but immediately returns to its former colour as soon as the pressure is removed.

It is said sometimes to be migratory. While the inflammation is declining in one part, it is gradually and insidiously creeping towards another more vital spot. The mucous membrane of the throat is not unfrequently attacked in this way, giving rise to a very dangerous and distressing symptom. Dr Watson seems to think, or rather asserts that a great many sudden death in erysipelas, (which cannot be accounted for in any other way) take place from this affection of the throat. In the same manner it may extend itself to some other part, as to the encephalon, giving rise to delirium, coma, effusion and death in a short time.

Like mumps too, and rheumatism it is said sometimes, to be of an er=

ratic disposition, or subject to a metastasis. This event however, I presume, is of rare occurrence, as Sir Watson says he does not recollect ever to have seen a case of it. Some who profess to have seen it, say that it always depends upon mal-treatment - the use of remedies, which are calculated to suppress the inflammation suddenly, and drive it as it were to some other abode.

It has been stated that confusion of the senses, delirium and coma are concomitants of the disease, but it is not to be understood that they are always present. In mild cases the patient may lie on his back without making much complaint, or giving any evidence of extreme suffering, and the mind may be perfectly clear. The symptoms, al-

though very irregular are generally well proportioned to the severity of the attack.

A great deal has been said by some about the visceral complications - more than they deserve I do not pretend to assert — yet that the gastro-enteritis, present during an attack of erysipelas is always the primary disorder, and that erysipelas is never an idiopathic disease, has I think been very justly refuted. Is it not as reasonable to suppose that gastro-enteritis is produced by erysipelas, as that it is always an accompanyment of burns of a certain degree of severity? In the treatment of small-pox and measles too, there are no symptoms so much deserving attention, as the affections of the mucous memb-

anes of the alimentary canal and the air passages. "It is familiar to all that gastro-enteritis is the most dangerous of the complications of erysipelas and variola, of all cutaneous affections the most to be dreaded; and that the mildest of these affections, measles for instance, is always attended with symptoms of irritation in the mucous membranes, and particularly in that which lines the alimentary canal"*

With regard to contagion as a cause of erysipelas, there has been, is still, and probably ever will be a difference of opinion. According to the observations of one class of writers, it is as certainly contagious under some circumstances, as

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*Bourgery's Minor surgery.

[illegible]

[illegible]

[illegible]

small-pox or measles, while another class contend that it is in no case possessed of any such a nature. It must be acknowledged by all that it is very hard to prove that a disease is contagious, when it is known to appear also, in a sporadic or epidemical form. There is another disease, of vastly more importance, which rests in precisely the same condition - puerperic peritonitis. Although, admitting a disease to be contagious, a knowledge of such a fact does not materially effect the diagnosis or the treatment, yet would it not be far better, for those whose lives are endangered by such a disbelief, if all would admit its contagious influence, and act accordingly?

There is very little doubt entertained generally, as to its sometimes

existing epidemically: in which case any thing that tends to over excite or debilitate the system, is said to favour its attack. It is frequently found advisable, in hospitals. (from this cause or contagion) and places where large numbers of infirm persons are crowded together, to suspend all surgical operations, for fear of exciting erysipelatous inflammation. Notwithstanding these precautions, large numbers having old ulcers, and broken down constitutions, are sometimes the victims of this malady.

There are a large number of cases however of erysipelas, which can be attributed to other and more obvious causes, than epidemical or contagious. As for instance, the sudden changes of temperature, or the

sudden application of cold to a part; local injuries - and it is astonishing how slight an injury is required sometimes to excite it - a mere scratch of a pin or a slight prick of a needle; bad food or irregularities in diet; an intemperate use of ardent spirits. The only case of severe phlegmonous erysipelas, that I ever saw, appeared to have been excited by the sting of an insect, while the person was asleep. Anger, an exciting, and fear, a depressing influence, are said to give rise to it, and sometimes, it must be confessed, it comes on when it can not be attributed to any cause whatever.

With regard to the treatment of erysipelas, it is probably quite sufficient for me, merely to

collect the most important remedial agents employed in its cure and give the names (if necessary) of those who have used them, without asserting the great value of one or the utter uselessness of another. There are few diseases perhaps, in which the young practitioner is more at a loss to determine what mode of treatment to adopt than in erysipelas - this is more or less the case in all diseases however, where diversities of opinion exist with regard to their treatment. Some depend on general bloodletting, some on purgatives, others on local remedies and others again on tonics.

General bloodletting, the "sheet anchor" as it has been called, in inflammation, deserves to be noticed first. It appears to have been more

generally employed in erysipelas, formerly, than at present - it is now scarcely ever resorted to. Dr Watson says, he does not bleed one patient from the arm in a hundred, and Dr Mackintosh, who recommends general blood-letting in congestive fever and in the cold stage of intermittent fever, gives the greatest caution against the use of this remedy in erysipelas. All writers admit however, that there are cases occasionally, in which general bloodletting, may not only be used without incurring any great danger to the patient, but in which it is most imperatively demanded, for his safety. For instance at the commencement of the attack when the pulse is both hard and frequent, and where there is much pain in the head and delirium. These

symptoms, I believe are not unfre=
quently met with in young strong
and robust constitution in the
county.

Cupping and leeching are very
commonly employed, in cases where
general bloodletting is considered
inadmissible, and from their
beneficial effects in similar cases
they would seem to be remedies of
considerable value. A serious ob=
jection has been made by some to the
use of leeches, which is, that their
bites occasionally excite irritation,
and consequently do more harm than
good; others profess, however, in num=
bers to a robust patient, of from fif=
teen to twenty, without realizing any
such effect.

Purgative medicines have in
all ages been chiefly relied on, but

no particular article of this class that I know of, is advisable in all cases— sometimes one may be demanded and sometimes another. When the patient is seen at the commencement of the attack, an emetic or an emetico-cathartic is occasionally administered. Tolerably full and repeated doses of calomel combined with small doses of antimony, are sometimes given with great advantage; by the conjoint use of these remedies an apperient, nauseating and sudorific effect is generally produced, which is always a desirable result. The visceral complications, must be looked to, so that nothing be administered, that would have a tendency to irritate the already inflamed stomach and bowels. There is a time in this, as in most other inflammatory diseases, when the antiphlogistic

treatment, (if pursued at all) must be abandoned, and the stimulant and tonic treatment must be resorted to. The principle indication for this change, is the supervention of typhoid symptoms, which come on sometimes sooner in the disease than at others and almost suddenly. The patient is therefore to be well watched and attended to, lest this change be not made in time for his safety.

There is a class of writers, who advocate the administration of tonics, immediately after the operation of a cathartic or an emetic and cathartic. The testimony in favour of this treatment is by no means inconsiderable. Among this class of writers is Dr Jackon of our own country, who professes to give from twelve to twenty five grains of quinia

in the course of twenty four hours or as large doses as the patient can bear. I can very willingly believe that each plan has been successfully practiced by its respective advocates, but how both <u>should</u> be successful is altogether inexplicable by me.

It should have been mentioned previously, that benefit may occasionally be derived from opiates after suppuration or gangrene has taken place, but they are almost always inadmissible previous to this event or at any time when there is a tendency to coma.

The local applications which have from time to time been made use of, recommended and subjected to the test of the world are almost innumerable. Some of them probably are at least palliative — others perhaps,

if they do no injury, do no good. Among them, those most to be relied on are the following. Hot fomentations, cold lotions, a solution of the sulphate of iron, mercurial ointment, flour or magnesia sprinkled over the inflamed surface puncturing it with lancets, blistering plaster applied around it, or a strong solution of the nitrate of silver or the caustic in substance. Sir Watson thinks that the best, is the constant application of flannels, wrung out of a hot decoction of poppy-heads, and that it should be one persons business to sit by the patient, and attend to this as long as it proves to be soothing and grateful to him.

I have now concluded, what to me, appears to be all that is required

and as I have frequently before found occasion to quote from Sir Watson's treatise, I will end by giving what he gives in few words — his general treatment of erysipelas. "After clearing out the alimentary canal then, I would not be active in either way, unless I saw some plain indication for activity. If the pulse become weaker, and I did not feel sure about the propriety of stimulating, I would give five or six grains of the carbonate of ammonia every four hours and beef tea. If the disease went on smoothly under that treatment, well and good. If the powers still continued to sink, I should have recourse to wine, or both bark and wine; but of the two, I am more friendly to wine; and as the pa=

tients like it better, you may be more sure of their taking it. If on the other hand there was much headache, and the pulse was hard, and the febrile distress great, I should apply a few leech= es and prescribe the tartarized antimony in a saline draught. The bowels should not be suffered to become confined; but the mild appeients are better than the drastics in these cases."

The end.

An

Inaugural Dissertation

on

Inflammation

Submitted to the Examination

of the

Provost, Regents & Faculty of Physic

of the

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for the

Degree of Doctor of Medicine

by

Isaac F. Taylor.

Inflammation.

The occurrence of inflammation is so common, and its more prominent symptoms so familiar, that it has long been distinguished as the chief element of disease. It has engrossed the attention of pathologists so entirely, that other important elements of disease have almost been overlooked; still the frequency of its occurrence, its great deviation from the healthy standard, and its important bearings upon the destinies of our species, altogether, make it a subject that can hardly occupy too much of our attention, and one with which we cannot become too familiar. We meet with it at every step of our professional career, occurring under every variety of form, from the simplest erythema to the utmost disorganization and death of the part: attacking all ages, sexes, classes and conditions of people, and acknowledging as its source a multiplicity of Causes. From the first dawnings of our science, from the time of Hippocrates and Celsus

to the present moment, its essential nature has been the subject of much vague hypothesis and speculation and though many of its phenomena have become comparatively more familiar to us, we are yet compelled to acknowledge some obscurity connected with its causes, and if we but succeed in tracing out some of its well established laws, as laid down by systematic authors we shall feel satisfied, and at the same time, the importance of the subject, our limited Space, and our inability to do the subject that justice which it so richly merits, will prevent us from taking more than a hasty glance at these laws —

Without regarding inflammation essentially as an excited or diminished action, or professing to be at all familiar with the ulterior changes in its course, we must be content for the present with the broad but not less true definition laid down by Prof. S.R. Smith, as being, an abnormal or diseased condition of both the vessels and nerves of the part inflamed, and we might add, an interruption of the relations of the part existing between the solids and fluids — In its essential nature, it has been regarded by some as an excited action, by others as a diminished, and by others as neither the one or the other essentially, but a compound action, partaking of the original lesion of a local tendency to decomposition, and a vital action striving to counterballance that tendency — Viewing it as a compound action we are enabled to refer its different phenomena to separate and distinct changes in the structures concerned in the diseased action,

and in so far as it presents evidences of exalted action, an increase of the natural sensibility, of the quantity of the circulation, of nutrition, and of organic contractility, we willingly admit it to be a process of essentially increased action. But there appears to be a superadded class of effects, for when the inflammation has existed for a certain time or of sufficient intensity, the tendency is to disorganization and death of the part, and this change ensues as soon as the change produced in the tissues is so great, that they loose the power of preserving the vital properties of the blood (which in a healthy state they do possess.) and this fluid is decomposed in the vessels. Now in this we are compelled to recognize a diminished action, and an interruption of the relations existing between the solids and fluids.

Before we proceed to examine the nature of inflammation, we may inquire the mode of the operation of its causes. It is generally asserted that the first impression, (as of many other pathological actions) is upon the nervous system; but this assumption we conceive, is by no means correct. That some causes of inflammation (Irritants) operate first upon the nervous system, is probable, for long before there are any of the evidences of inflammation, their action on the sensative nerves, is felt. There is first nervous irritation, inflammation follows after, or we may have it follow by a transfer from sympathy, of which, nerves are the canal for communication

On the other hand, there is abundant proof, that the nerves are not in most cases primarially affected, for inflammation will occur in a part, the nerves of which have been divided or paralized, or inflammations excited by cold are often preceded by the most marked nervous derangement; or again, the strongest impressions of cold on the system are often not followed by this result. Seeing then, that inflammation is frequently excited without any obvious affection of the nerves, and often is not excited when nervous irritation is most intense, it may we think, fairly be inferred, that an impression upon the nerves is not an essential part of the first process of inflammation, but that they are for the most part concerned in the ulterior phenomena, and depending entirely upon the change in the vascular system; but from the intimacy of connection, and the mutual bearing of each of these general systems upon each other, we find in every case of ordinary inflammation, both are more or less implicated. From the definition, "a diseased state of the vessels and nerves of the part". The causes of inflammation may reside in a peculiar predisposition, and this we find in a majority of cases connected with debility, the varieties of which are so numerous, that our limits will prohibit us from giving any detailed account.

Any circumstance that especially affects the vascular system, (renders the body liable to disease.
whether from original conformation, or from previous disease, or

of causes in actual operation at the time, for anything that tends to impair the healthy tone and ballance of the circulation, predisposes to inflammation from causes which act generally. But we are led to an opposite conclusion from an observation of the local causes, such as Irritate- for an excited condition certainly favors the operation of such causes in the development of inflammation.

The exciting causes of inflammation may very properly be divided into those which act locally on the part, and those which act more generally on other parts; or we may divide them into direct- as the first class and into Indirect—

The local or direct causes may be divided into mechanical, chemical and vital agents or Irritants. A grain of sand in the eye or a thorn in the flesh are examples of mechanical Irritants which if allowed to remain for a certain time, all the evidences of inflammation will follow. Chemical Irritants are those which operate on matter by chemical affinity between the agents and the matter, and which tend to the decomposition of matter. Vital Irritants are not act on dead animal matter. We include in this class various noxious agents generated in the living or recently dead body. A perverted secretion of an organ, may and often does become so acrid as to excoriate and inflame parts with which

it comes in contact, or inflammation may be caused by excrementitious matter retained in the blood, from the interrupted function of part as the backward effects of the urea in Bright's disease. So far as the inflammation by this last cause is in, or contiguous to the part previously affected, it properly belongs to the class of local excitants, but when it affects distant parts, (as is usually the case) it comes under our second division of Causes, or those whose action is indirect— This second division or indirect-agents are fewer in number, but they as frequently produce disease as the more direct. They as the first class operate by first producing congestion, which if continued a sufficient time lights up inflammation. Among the number of such agents may be enumerated the suppression of natural secretions and excretions, or morbid discharges, which by being suddenly checked or altered in character, may have backward effects, and be the exciting cause of inflammation, and though not the most fruitful source of inflammation, when they do occur, they may be looked upon as having a two-fold action, congestion or local fulness which is at the same time more disposed to take on inflammation, from the morbid matter retained in the blood acting as a local Irritant and depressed vital action. By far the most frequent of the of the indirect

agents in the production of disease is cold, which from its frequency in the production of inflammation demands more of our attention. It is probable that its primary action on the arterial system is stimulant, but subsequently and very soon it manifest a sedative action. This primary action is more especially manifested on the capillary system, causing an intropulsion of blood from the periphery to the heart. After a longer or shorter period, the capillaries loose their contractility - which has been heightened by the cold, and then dilate, and the parts become livid blue & congested. This condition is followed by one of those efforts of nature, by which she endeavors to free herself from anything that depresses the vital functions or is detrimental to the well being of the system. Irritation, inflammation and their consequences follow, and they will be more manifest when the cold has been but partial, applied for not too long a time and in a good constitution.—

We might with propriety dwell on the causes and their modus operandi in the production of inflammation, but we hasten to consider the essential nature of inflammation as observed under the microscope, and as we have more especially considered the local causes, we will take as a type for our future consideration, an inflammation, produced by those local causes, and be content

with a summary of the most important changes produced on the blood vessels and their contents. — — It is certain from direct observation that there is an increased flow of blood through the part inflamed. But if this were the only change there would be no difference between determination and inflammation. There has been one great point of distinction established by the microscope: superadded to the determination there is more or less obstruction to the passage of the blood through the part inflamed. Thus in experiments upon the frog's web, when the part is inflamed from local Irritation, the blood is seen to move most slowly in the part most Irritated, and gradually accumulating in the vessels, renders them larger veder, and more tortuous until the motion ceases entirely. The question now naturally arises what is the cause of this retardation. To solve this that various Hypotheses have been set up. Now to seek for an explanation, we have the vessels and the blood both before us, and the cause to be referred to the one or the other or both. The latter cause we think to be the more rational.

It has been ascertained by direct experiment that the first effect of a strong Irritant upon the frog's web is, the dilitation of the vessels. They lose their organic contractility, become expanded and the blood contained in them is stagnant and coagulated.

Now by reference to a well known law of hydraulics, we can easily reconcile retardation of the current through the part with dilitation of the tubes. They are more flacid, more distensible and less capable of resisting the impulse of the blood, and instead of carrying the blood on in the direction of its channel, their parieties readily yield before the impulse from behind, and the blood passes slower through the part, than it would, did the vessels possess their natural organic contractility. Thus we see that inflammation essentially consists in both increased flow of blood & Congestion. In determination the arteries are enlarged but their organic contractility is not overcome and their coats possess sufficient tone to be no impediment to the current.

In congestion the capillaries are enlarged without an increase in the size of the arteries. Now if to congested capillaries we add the ~~increased~~ increased and abrupt force ~~from~~ of enlarged arteries, we have the incipient stage of inflammation. It may seem strange that I have supposed a similar state of the arteries and capillaries, to be the cause of an increased flow through one and a diminished through the other, but as we conceive, this is, no objection. The arteries as compared with the capillaries, are fewer in number, nearer the heart the source of power and are

easily supplied by it. The current in the arteries is naturally more rapid than through the capillaries. The current into them after they have lost some of their tone serves to stretch them to tension and they present even less obstacle to the flow than in health. In the capillaries on the other hand, the force is so much distributed, that it is easily disturbed, and the motion, naturally tardy, is readily arrested; the blood will oscillate in the full vessels rather than pass through them and the main current will pass through collateral anastomosing branches. Hence in an inflamed part, the condition is too much blood with the motion diminished at the centre and most inflamed part, and increased through the less inflamed parts or those adjacent. The conditions above which are found in the vessels, we may fairly infer are instrumental in the retardation of the current of the blood, but not the sole cause. If we look at the condition of the blood itself we will see another obvious reason; the natural relation between the solids and fluids are broken up, and the blood changes its properties within the inflamed vessels. This change was pointed out & some stated by John Hunter, Gendrin and Marshall Hall. It seems to be an essential part of inflammation to furnish white globules (lymph globules according to Müller in the inflamed vessels, and it was left for Dr. Williams to trace them under the microscope, and to give the most clear exposition of their nature. Their production must probably be referred to an altered law in nutrition & inflammation, but that they

as produced in the diseased part, seems to be unquestionable. They have a remarkable disposition to adhere to the walls of the vessels and to each other, which is probably owing, more to their physical structure than to any vital action. They are more compact than the red globules and do not expose so large a surface to the action of the current and they appear to possess a distinctly adhesive character which causes them to stick to the sides of the vessels, whereas the red globules from their greater size, their smoothness and adhesive nature, will be carried on in the current to some extent, whilst the white globules are allowed to remain in the part, adhering to the walls of the vessels

The direct Irritants seem to produce obstruction in both these ways, but of the two, the latter appears to be the most efficient cause. Notwithstanding this obstruction through an inflamed part, however produced, the experiments of Drs Allison & Lawrence, prove conclusively that there is an increased amount of blood circulating in the part that the collateral circulation, more than compensates for the obstructed flow in the more central part. The redness of inflammation presents great varieties, according to the number of the capillaries and their distribution; and is obviously due to the increased quantity of blood in these vessels. Contractility is in a measure lost from

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the effect of the exciting cause, the vessels are dilated and the coloring matter is entangled in the colorless or lymph globules which are found in such abundance. Increased redness has been accounted for by the formation of new vessels in the part, and by the blood forcing its way through the textures. This may be so in some rare cases and probably is so, but in the majority of cases it is probable the delusion has arisen from the distention of the capillaries which in health, are not of sufficient size to carry the red globules, or the redness in many cases arises, partly from extravasation from the over-distended vessels into the surrounding structures. In the form of incipient inflammation, we usually find the redness bright & livid and in the more chronic or later stages the redness is not so bright, more livid and dark as if the part was engorged with venous blood. As the inflammation subsides the parts gradually assume their natural appearance —

Increased heat is a very important and valuable sign in inflammation as it seems to distinguish it from congestion or nervous Irritability — It is obviously dependent, much upon the increased flow of blood through the part, and is greatest in extreme and active inflammation.

The interruption of the great refrigerating process, which takes place through the capillary system undoubtedly tends much to increase the temperature. The secretions and the insensible transpirable matter are not allowed to escape, and as a consequence, the great frigorific process of a fluid passing into a

medium of greater attenuation or state of vapor, is cut off and the calorie allowed to accumulate in the part. Now whether these conditions are the sole cause of the accumulation of heat in the part, is we think, in some degree questionable; and if allowed to reason by analogy, we could see changes taking place, which, under ordinary circumstances would be recognized as a source of calorie – nutrition is more active, the number of vital changes augmented and the purely chemical actions between the blood and the tissues must, we would think, be to some extent a source of calorie. We have only to refer back to the functions in health and we see its analogue; for in proportion to the activity of the nutritive process whilst in health, so is the capability to resist low temperature, or is the actual temperature of the individual. These speculations may be too vague to occupy a place in the annals of disease, but the conviction on our mind is nevertheless true.

The swelling of an inflamed part is caused in some degree by the enlargement of the vessels, but chiefly by effusions from them and the situation, form and degree of swelling will greatly depend on the natural structure of the part. One of the earliest results of inflammation is effusion, and these effused matters are of very different kinds; depending much upon the structure diseased and the stage of the inflammation.

Pain is another of the signs of inflammation; and is caused by and exaltation of sensibility; an effect, which a determination of blood is always found to produce. It is

ofin much increased by tension or pressure, arising from effusion. The natural contractility also influences much, being more seen in membranous than in parenchymatous and spongy organs. Besides pain & tenderness, ~~increased~~ increased sensibility sometimes exhibits other modifications, such as soreness, tingling, itching, burning &c.

In the enumeration of the signs of inflammation, there is one other circumstance to be taken into account, and that is, the fibrinous or buffy state of the blood when drawn from an inflamed organ. This appearance of the blood has given rise to some difference of opinion among pathologists: some regarding it as entirely independent of the part inflamed and developed in the general circulating mass, whilst others claim its development in the diseased part, and giving incontestable evidence (as we conceive) of this fact. In the early stages of inflammation we find buffed blood in the inflamed part, and in blood from no other part of the system. After the inflammation has set up sympathetic action, and the force of the heart and arteries has quickened the circulation we have the buffed appearance of the blood, drawn from the general system and not until then. The increase of white globules, as seen by the microscope is a kind of demonstration of this change taking on in the part. That from sympathetic action or continuation of the irritation, other parts subsequently participate in this production, looks rational to us. Our conclusions are strengthened, as to its primary origin in the inflamed part if we but reflect upon many other essential changes which take place in what are called the terminations of inflammation. When natural relations are broken up, it is hard to conceive of the formation of

pus, to which, nothing analagous is found in the healthy state. Now these specific changes which intervene the blood and the vessels, the changes between the blood of such again from the healthy condition, and the signs that we have enumerated, redness, pain, heat and swelling are what characterize an inflammation, and serve to distinguish it from mere congestion or determination of blood. Now of these four last signs, there is nothing constant in their occurrance, and though mostly present in an external local inflammation, such as we have endeavored to describe, no one of them can be looked upon as pathognomonic. They may all be well marked in cases of inflammation, or any one or more of them, may be absent, and still inflammation exist. Local inflammation rarely exists any great length of time or of great intensity, without its effects extending to the whole system, and this, may properly be termed sympathetic or Imitative fever. The functions of the whole body are disordered, the contractions of the heart more frequent and forcible than in health; arterial tone is increased; the skin is dry and hot and the appetite and strength much impaired. Our limits will not allow us to examine these various disturbances in detail and we hasten to the consideration of what is called the terminations of inflammation, as being more immediately connected with our subject.

As a general classification the four following divisions may be termed the events of inflammation viz, Effusion, Resolution, Suppuration and Gangrene.

One of the earliest result of inflammation is Effusion, but unlike resolution is not always an event of inflammation. An abundant effusion of liquor sanguinis

or coagulable lymph or serum a pus usually lowers the inflammation but often does not remove it. The effused matter may in fact have sundry bad effects, by compressing stuffing or obstructing the several structures in which it accumulates; or this effusion may be the plasma or fibrin of the blood, which is in the highest degree organizable.

Another and marked event of inflammation is Resolution which is characterized by the subsidence of the disease. First the heat and pain, and more gradually the redness and swelling disappear, the capillaries resume their healthy action, admitting the free escape of perspirable matters, the tension of the part is thereby removed and the pain which is to a great extent caused by it, subsides. In some instances congestion and some of its results remain behind after the disease has subsided – in this case effused matter (if any remains) is quickly absorbed and the part is restored to that of health. This may be termed the spontaneous cure of inflammation, and to this event, there seems always to be a natural tendency in the part diseased. This may in a strict sense be termed an event or a termination of inflammation and is the great "desideratum" with the Physician or Surgeon when called to see inflammation in its incipient stage. But this end is not always obtained; the disease advances in intensity until it marks our third division or suppuration. — — — Intensity and duration of inflammation pretty surely lead to suppuration, which event is also hastened by the condition of the blood or by the admission of atmospheric air. How this last influences we are not prepared to say, (probably by a chemical change exerted by the air on the exudation globules!) nor are we more capable of saying what the precise state of the blood is that most predisposes

to suppuration. We generally find it connected with a characters ill-nourished state of the system. Pure pus consists of serum & globules of pretty regular size and form, as seen under the microscope. These globules are evidently modifications of the exudation corpuscles, produced by the diseased action in the part inflamed. In this as in various other changes produced in a diseased part, we see the part performing the action of a gland in health, producing a change in the healthy fluid circulating through them. The process of suppuration strongly illustrates the opposite tendencies of the elements of inflammation. Exudation globules are thrown out in one stage of the inflammation and directly undergo organization, whilst at another stage when there is a greater reduction of vital action, exudation corpuscles are thrown out as before but as speedily assume the character of pus globules. From the reduction of the organic power the solids are rendered incapable of withstanding the solvent power of the pus globules. The textures are gradually dissolved and thrown out with the effused matter, or are absorbed and carried into the general circulation by the great absorbent system, the veins, and probably also by the lymphatics. That the pus globules should escape while everything in their vicinity is absorbed and carried away, will not appear strange when we take into account their large size, as compared with the dissolved solids. The appearance of pus in the circulation is to be explained in nearly, if not in all cases, by an action on the inside of the vessels similar to that which forms pus on the outside of them. As suppuration increases, and as absorption predominates over healthy granulations from exudation globules, we have the formation of an excavated or spreading ulceration or abscess. Many causes influence the termination of inflammation in ulcer-

ation; and the ulcers of ulcerations most commonly originate in limited inflammations of the skin or of the mucous membranes; they may continue to spread almost indefinitely from the continued operation of their cause, or they may heal by the effusion of exudation corpuscles and their organization. The essential cause of ulceration appears to be the destruction of the vitality of the part and the preponderance of absorption over the reparative process.

Another termination of inflammation is Gangrene, and it may with propriety be called a termination. It consists in the death of the part inflamed. In suppuration the dying textures are disturbed and carried away by the absorbants or are otherwise discharged. In gangrene the textures die, but die more extensively than pus is formed; they are not dissolved and carried off but suffered to remain in the part. In some cases the dead portion is dissolved away at its surface by the inflammatory exudation from the living parts, and is thus separated or sloughed away from them. The circumstances which predispose to this termination, are those which completely destroy the part, which greatly injure the composition of the blood or completely obstruct its circulation through the diseased part.

In conclusion we might say, that we do not always find these events of inflammation occurring in the order we have laid them down, neither do we find them occurring singly or uncomplicated: thus, resolution is usually attended with some effusion; suppuration is almost always attended with the effusion of coagulable lymph and sloughing often attended with gangrene &c.

Many circumstances combine to change the color, to alter the character and to predispose to one termination rather than another. Inflammation also varies much in its results as it attacks different tissues, which cause, as being the most frequent in its occurrence, and the most striking in its phenomena, we stop to consider in a brief manner.

When it effects cellular tissues, most, if not all the events which I have attempted to describe are likely to occur. There is much swelling and when the part inflamed is so situated that it cannot readily yield to the distention, there is much pain. There is a strong tendency to the formation of circumscribed abscess. The extension of the abscess is prevented, by a coagulable lymph thrown out around it and forms for the abscess a complete wall. The adhesive sets bounds to the suppurative inflammation or no such boundary wall appears and the ulceration spreads & diffuses, destroying the tissues over a large extent of surface. This diffused or fagidenic variety often follows the introduction of animal poisons into the system, which has the effect of destroying the plasticity of the blood. The cellular tissue is liable to be left permanently thickened after the subsidence of an inflammations.

The glands and solid viscera suffer changes analagous to those of the cellular tissue; probably because this tissue enters so largely into their composition. The liver as an example is ordinarily much swollen, much disposed to the formation of abscess, and attended with bad bilious pain—

Inflammation in nervous tissue is characterized by sharp and severe pain, by hardness of pulse and buffed blood. Its tendency is to spread & to effuse serous fluid and coagulable lymph, and when the inflammation is very violent, or when it gets to the inflamed surface, we have an effusion of pus. The most constant occurrence in its course is the effusion of coagulable lymph, which has a strong tendency to organize — False membranes are formed, gluing surfaces together and causing at times various distractions or at other times exerting the most salutary effects. Ulceration and mortification are rare occurrences, except when extending from other contiguous tissues, as in perforation of the Intestines, where the ulceration extends from the mucous membrane, which is exceedingly liable to it. Inflammation long continued in this tissue has the effect of permanently hardening them.

We see that each separate tissue is governed, while under the influence of inflammation, by its own peculiar laws, some of them more or less analagous, as the nervous and synovial. This correspondence in laws is generally connected with a correspondence in structure. When we find the structures widely differing as the mucous and serous tissues, we expect to find them differing also in their functions either in health or in disease.

A remarkable contrast is shown between the mucous and serous tissues, for in the former inflammation occasions next to the most intense pain whilst the other is characterized by a slight amount of pain — It also differs in the sympathetic

action. Fever is rarely or never so high and well marked in the mucous tissues and in the appearance of the blood which more seldom exhibits the buffy coat; there is also less disposition to the effusion of coagulable lymph and with this we are struck with the great adaptiveness of the different structures to perform their natural functions. Inflammation in this tissue sometimes has a strong tendency to spread, or it may confine itself to a small and definite space and as it were, burrowing through the parts adjacent, produces an ulceration which indirectly is the cause of death.

Inflammation of the skin presents many characteristics in common with mucous membranes. The character of its effusion, the disposition to ulcerate or be diffused, is very much the same in the one as in the other. It however differs in its greater liability to specific disease, and in the character of its pain, which is more of a burning, itching and smarting character.

Treatment— This is subject to much modification as we meet with inflammation in the one or the other of its various stages. It varies also to some extent as different tissues are inflamed, or as to the general state of the patient, independent of the local lesion. In attempting to describe the phenomena and progress of inflammation, we have taken local external inflammation as a type. We shall keep that type principally in view in what we have to say of the treatment.

In all cases our first object is to obtain resolution and if this is not

possible, we must aim at securing that result of inflammation, which would be the most fortunate in the particular case before us. In external inflammation, good suppuration will be the result most desirable. In internal inflammation it is sometimes most desirable to obtain suppuration, at other times adhesion. There must be some distinction made between the treatment proper for the inflammation itself and that for the effects of the inflammation. The first grand indication in the treatment of all inflammations, with perhaps one exception, is the removal of the exciting cause, whether chemical, mechanical or vital. Next in importance to the removal or prevention of the re-appearance of the exciting cause, must be placed the observance of the antiphlogistic regimen. This consists in the avoidance of every stimulus that can be avoided whether Internal or External. Of all the direct remedies for the reduction of inflammation, blood letting is the most important when employed in the early and acute stage of the disease. It may be employed either locally or generally. The main object in general bleeding, is to diminish the whole quantity of blood in the system and thereby lessen the force of the Hearts action, whilst the object in local or topical bleeding is in most cases to relieve the engorged capillaries of the part diseased. Next in importance to blood-letting in the treatment of inflammation, are purgatives. Two points are gained by their employment: first the stomach and Intestines are freed from all acrid and Irritating matters and secondly at the same time direct depletion is produced by means of the serous dis-

changes produced by their action on the large extent of mucous membrane.
Mercury as a remedial agent, in controlling or altogether preventing adhesive inflammation, is surpassed by no other agent. Antimony is a very valuable agent in some forms of inflammation. It subdues the action of the heart and arteries, produces nausea, paleness, sinking of the pulse, and frequently gives great relief to the local symptoms. It is one of our most valuable means to keep up the impression made on the system, by the abstraction of blood, when at the same time it is important to accomplish this without direct depletion.
Opium administered in full doses after a free and efficient bleeding, is best adapted to those cases, in which there is much nervous irritation, or when the disease is local accompanied with much pain.
To be efficient, it must be administered in full doses — It prevents the rekindling of inflammation which is likely to result from irritation of the nervous system. In some cases of inflammation, most or all of these means may be called into requisition, but to give a full and detailed account of their "modus operandi" and the different conditions of the system under which one is preferable to another would far exceed our limits
As to the local treatment, our most efficient means are Cups and leeches. The first are preferable in deep seated inflammations —

They have the advantage of leeches in producing not only depletion, but Counter-Irritation. Leeches on the other hand are more appropriate in cases of superficial inflammation, or when there is much tenderness or increased sensibility; or when parts are so situated that they cannot be conveniently reached by cups, or when we want prolonged bleeding. The after bleeding, in either case, may be promoted by warm fomentations

Cold applications to the part are of much importance, for by their evaporation the reduce the temperature of the part to which they are applied. Cold applications of a solution of Plumbi Acetatis, are said to possess advantages over simple water, by more effectually allaying nervous Irritation, and we may, by the addition of Opium more effectually allay pain and morbid sensibility—

Counter Irritation is one of our most valuable means, but in order that it should be effectual as a curative agent some general rule should be observed in its application. It would be in vain that we should strive to allay inflammation in this way: by applying it to parts already of as much heightened sensibility as the part diseased, or in the immediate vicinity and upon the same tissue diseased— By the active employment of the above remedies, we may obtain the most favorable results in inflammation. Resolution and the formation of pus may be entirely prevented, or we may fail in this effort, and the disease may run into the stage of suppuration,

After it has formed, the indications are to cause its evacuation, and induce granulation & Cicatrization. Our cold applications must now be exchanged for warm fomentations & poultices. As the fever abates (which is a common result) we must allow our patient a gradual amount of nourishing food—

Poultices fulfil valuable indications— They relax the skin, promote perspiration, sooth pain, encourage the formation of pus and expedite its progress to the surface— After the free formation of pus the inflammatory symptoms usually subside, but if they do not, we must then again resort to our antiphlogistics. When the matter is formed but firmly bound down by fascia which is often the case, the sooner we make free incision, the better— Ulceration which is often intimately connected with suppuration, presents many varieties, and requires as many varieties of treatment— In some cases we resort to depletory means, in others soothing, alteratives or stimulants, according as it may be of the one variety or of the other, or as it may be connected with a peculiar state of the system.

In the treatment of gangrene, the indications are, if in a robust subject and much inflammation exists— depletory means— It may occur in an opposite state of the system, and then, we support the system by tonics and stimulants, and endeavor to cause the formation of a line of healthy adhesion

An

Inaugural Dissertation.

On The

Pathology of Tubercle.

Submitted to the Examination

of the

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of the

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Of Doctor of Medicine.

by James L. Mc Cormick

Pathology of Tubercle.

Tubercles, what are they? We hear the word tubercle constantly used, but how few there are out of the many who utter it, who can give anything like a satisfactory answer to the question upon which we have based our thesis. Hundreds have never even seen them; and the vast majority of medical men have very crude and erroneous ideas respecting their

pathology.

We frequently see the tender infant convulsed and tortured, in the arms of its agonised parent, by the fiercest spasm, until its system exhausted, yields itself a reluctant prey. The post mortem reveals, what would appear to be, to the soul of the practitioner, a balm, which lulls his anxiety and at once pours the oil of consolation over his doubting soul, so that he wipes his scalpel, with a complacency that is truly enviable, for he can now tell the heart-stricken parents, that the cause of death was "tubercles on the brain". He goes on his way rejoicing, gratified, that it turned out to be this potent destroyer. tubercle; Again, we are often called to witness scenes like these, sometimes in our own circle of acquaintances, we see a lovely being, just expanding into womanhood, the brightest star amidst the throng, in which she moves; the focus of admiration and the idol of all who know

her— oftener still, we see some favourite child of science, possessed of a brilliant genius, a mind of the finest mould, he has but recently emerged from the halls of wisdom, where days and years have been spent in assiduous labour; and rigid selfdenial, and he is now about to reap his well earned laurels, and glow with pleasure and gratification, at the acclamations and caresses of his friends, when lo! the destroyer cometh. Both shining victims have been singled out by the keen archer;— a slight cough attracts attention,— it increases,— the nights are passed restlessly and feverishly; the Doctor is consulted, the first tap of his fingers upon the patients chest rings the death knell in his ear! Is he startled, does his countenance become blanched;— does he bend his whole powers of thought to devise a remedy;— does he even ask himself the question, can I arrest it? no! He shrugs his shoulders and pronounces it, with the most inimitable sang froid,

tubercles in the lungs. and he thinks and acts as if his duty was all over, and nothing more was now expected of him, than benevolently to take the patient by the hand, and to show him the smoothest and easiest path to the grave! such is but a faint and imperfect outline, that have existed, of thousands of cases, and are constantly occurring, though all will admit the fact, that one fifth of the human race fall victims to this insidious destroyer, yet there are multitudes in the profession, who are satisfied with their ignorance, and make no effort whatever, to increase what little knowledge they have, with regard to this destructive agent. From what has been said. we need not ask, wether the answer to this query is of such slight importance, as the conduct of the great mass of the medical world indicate. We unhesitatingly assert our belief that upon the answer to that question, hangs the fate of millions of our race. Tell us the essential nature,

the true pathology of tubercle, and the causes of its developement, and the treatment will be indicated. We would say further, that it is only upon such data, that we can found any treatment whatever; - without them, all is empiricism and uncertainty. Think not however, from what has been promised that we are so presumptuous, to imagine that we can, or ever intend to undertake to furnish, in this thesis; to the world in general or the medical faculty in particular, this desired information, for we can reproovingly exclaim, if those who have gone before us cannot give us the information, alas! we know not, all that a typo can and is expected to do, is to follow the path as far as the torches of the pioneers illumine it, we may probably at some future day, by perseverance & effort, be able to overtake the foremost, kindle our torch by his and push forward into the vast, dark and untried regions of the great

unknown. In examining the subject we have selected, we have concluded upon the following arrangement as being the most natural and uncomplicated. In the first place we will examine the tuberculous matter itself; describe its appearance, and its composition. In the second place we will state briefly the different organs in which it may be deposited, and the symptoms by which its different situations are indicated, and in the third place we will investigate the causes of its deposition and the laws which regulate it.

The definition of tubercle given by Dr Carswell appears to us to be the safest and most comprehensive that we can start with, "Tuberculous matter, says he, is a pale yellow, or yellowish grey, opaque, unorganised substance; the form, consistence and composition of which, vary with the nature of the part, in which, it is formed and

at the period at which they are examined. This definition comprises nearly everything that we know of the appearance of tubercle, and as far as we have investigated the subject coincides, as far as it goes, with the testimony of the great majority of other Pathologists. but as some parts of it have been made the subject of warm discussion, we will be under the necessity of examining each of these statements in detail. In order to get the most clear and distinct idea of tubercle we will select the tuberculous lung. When we cut into the lungs of a person who has died of tubercular consumption, we will find the cut surface presenting various conditions, and essentially different appearances. In one part of the lung we may notice a number of small granules of different colours and degrees of transparency. we may have them of a reddish drab, or more gray and ash coloured. They are

sometimes, though rarely, devoid of colour and perfectly transparent,— they are quite hard, and when pressed between the fingers appear to be almost as solid as cartilage,— there is often noticed in these granulations an opaque speck of a yellowish white colour, these indurations were denominated by Laennec, miliary granulations or miliary tubercles. As these will enter freely extensively into our future remarks on the pathology of tubercle, we will leave this description to pass on to the next appearances, which we have in the lung. The indurations which now claim our attention, are composed of bodies having nearly the same hardness as the miliary granulations, although their colour is much darker, which is owing to the presence of blood, and the dark pulmonary matter in it. scattered through these indurated masses we are often enabled to distinguish spots,

which are lighter in colour and more opague, they are of a yellowish white colour, of different forms and sizes, generally round and they are also of different consistency, some are quite solid almost as much so as the dark indurations, but they have not the same tenacity; others are of a more cheesy consistency, and in some parts of the lungs, we find these considerably softened, still however retaining their light colour and opacity. The form or external configuration of tubercle, varies in different organs and under different circumstances, and although it is a legitimate part of our subject, yet it is very unimportant in a practical point. It is determined not by any inherent principle, but governed entirely by external accidental circumstances, for example, it assumes the form of a shut sac on secreting surfaces.

while on the other hand, when it is bounded by the walls of an aircell, we find it as we should most naturally expect, of a globular figure. For similar reasons it assumes a tubular or cylindrical shape, when deposited in the bronchii. In the liver it presents a ramified appearance, the branches terminating in bulbous extremities. and so with regard to other situations.
We sometimes find a whole organ or the greater part of an organ, filled with tuberculous matter, when we say that the organ is infiltrated under such circumstances, it is amorpous.
The granular arrangement especially in the lungs is owing to the accumulation of this morbid product in a small number of contiguous aircells; the lobular character which it sometimes presents in the same organ, is produced by its being deposited in the aircells of a number of lobules,

the neighbouring lobules being healthy.
Having thus described the appearance of the tubercle, we will now relate what is known (or supposed to be known) with regard to its composition. Anatomically considered, we can say with certainty, that it has no internal definite arrangement, some microscopical observers assure us that it appears to be formed of granules, corpuscles and cells. Now we know that almost all, we might safely say all highly organised tissues, have their origin in cells mixed with granular matter, these not only grow into higher organisations, but also have the power of generating or evolving other organic germs, this power the cells of tubercle have not, but on the contrary their tendency is to degenerate and break down, so that we must either conclude that these observers have been deceived with regard to their cellular structure, or that they must be greatly deficient in that plastic force,

which belongs to the others.

In a late number of the Retrospect, part 10 page 36. Prof Shultz, in speaking of this hypothesis of Gluge, Vogel and others, denies the truth of it, and thus explains what appeared to them to be cells. He says that this cellular structure only occurs in the latter stages, when the tubercle is resolved into pus, and he very plausibly adds, "and the appearance truly arises from the formation of pus globules, no cells are discovered as long as the tubercles remain in the shape of diaphanous granules, but merely a uniform mass, into which, at a later period of the caseous alteration of the tubercle, granular flocculi are deposited. In those cases where a few stray globules are perceived, by means of the microscope, in the semi-transparent tubercle, these are nothing else than fat finely disseminated through the tubercular mass. This view appears to us to be much more consistent

with the nature of the tubercle and the various changes which it undergoes.

We must however candidly express our belief, that with regard to the histiology very little is known, and what has been advanced is far from being satisfactory. We can speak however with much greater certainty and accuracy, with regard to its chemical composition.

In man tubercle is chiefly composed of albumen, with various proportions of gelatine and fibrine, the salts enter also in different proportions into its composition.

The following table will represent the proportions of the ingredients found, in 6 grammes or 93 English grains of firm tubercular matter.

	Gramme	deci	100 parts contain	
Albumen	1	4	Animal matter	98.15
Gelatine	1	2	Muriate of Soda	1.185
Fibrine	1	8	Phosphate of Lime	
Water	1	6	Carbonate of Lime	

From this table we discover that it contains most fibrine, and we may close this branch of our subject by remarking that the chemical analysis must constitute a very important part of those means, by which, we are to discover the cause of the formation of tubercle.
We have now (imperfectly it may be) investigated the first division of our subject, we are now prepared to take up the second branch, which is, to state the different organs, in which it may be deposited and the symptoms, by which its different situations are indicated.
The mucous system is by far the most frequent seat of tuberculous matter. Take any organ in the body, which is obnoxious to the deposition of tubercle and if it have a mucous tissue we will almost invariably find it there. For instance, the mucous membranes of the lungs, prima via, liver ureters and generative organs. With regard to organs the most frequent seat, is in the respiratory

organs, although the mucous tissue is the point of selection for the deposition of tuberculous matter, yet we not unfrequently find it on serous surfaces, throughout the cellular tissue, and studding the Pleura, and Peritoneum and occupying the brain. In those organs in which the serous and mucous tissue both enter, we find both membranes sometimes the seat of tubercle at the same time. The tuberculous matter may sometimes, though very rarely, be found in the blood; The Spleen is the organ, in which this can be best detected, from its structure, which is spongy. The different changes through which the blood passes in becoming tuberculous, can be very well seen. As a summary of the different observations, which have been made upon this branch of our subject, we may say that the mucous and serous surfaces and the blood, are the exclusive seats of tuberculous

matter. The first being by far the most frequent seat. We never find this deposite in the molecular structure of organs, It always makes its appearance on free surfaces as a product of secretion.

With regard to the organs in which tubercle may be located, enough has been said before to indicate them, we will therefore but briefly notice those, which are the most frequent seat of this morbid deposit. The organs of respiration stand at the head of the list. What is of the most value in a diagnostic point, is the comparative frequency of the tuberculous deposit in each lung, and in different parts of the same lung, From a vast number of observations the following result have been obtained. The superior and posterior portions of either lung, but far more frequently that of the left, is so generally the situation in which, the formation of tuberculous matter is found, or at least

first takes place, that its existence elsewhere may be regarded as a secondary occurrence.

The organs of digestion come next in order; we generally find the small intestines the most frequently affected. here we have two classes of glands, the solitary or Brunonian and agminated (the patches of Peyer). now they are more frequently found in the latter than in the former, next to the ilium in order of frequency is the caput cæcum coli. It is very rare in the jejunum and It is scarcely ever met with in the duodenum, stomach, æsophagus, pharynx or mouth. The spleen is very seldom the seat of tubercle, except in children, in them we will find it frequently to be the case. the spleen has been found in some cases to be perfectly filled with tuberculous matter.

The brain, cerebellum and spinal cord are also the seat of this deposite, though

the former more frequently than the latter. This deposit may be found in all parts of the brain in varying masses. The brains of children are more frequently affected with it than those of adults.

The absorbents are also frequently the seat of tuberculous deposit. But the glands appear to be more prone to it than the absorbents themselves.

These are the organs, in which, this morbid deposit is found most frequently. nearly every organ in the body however may be, and sometimes is, the seat of it. we never have it occuring however, in all organs at once. This law appears to hold good connected with tubercles in the lungs. we usually have them in the small intestines, although we may have them exclusively in the lungs, though as a general rule whenever we have tubercular deposits any where else, we do not always or even

commonly have them in the lungs. For instance, we may have the peritoneum studded with tubercles and masses of them may also exist in the adhesions, which unite together the intestines and other abdominal viscera, and yet not a single tubercle be found in the lungs.

We will now turn our attention to the Pathology of Tubercle. And here if we choosed we might launch at once into a wild sea of discussion and an ocean of speculation, but it will be our design merely to select what appears to us to be most consistent with reason and true pathology. As this part of our subject is but a history of pure observations, we will be obliged to draw largely upon what has been written by others, reserving to ourselves the humble office of selecting and arranging.

we will follow in this department of our subject the opinions and researches of Professor Alison, whose views may be considered as the most modern, and which appear to be considered, as most consistent with reason and sound pathology. We have first to deal with the miliary tubercles, or those indurations which precede the yellow tubercle.— It is generally believed that these are secreted by the blood on free surfaces of membranes, and in addition to this, I think satisfactory reason has been given, why we should consider them as unorganised. The Great question to be answered is, what is the cause of their deposition? Alison and others contend, that it is a certain amount of irritation set up, which invites an efflux of blood to the part, which pours out its fibrine, and thus the hard miliary granules are formed.

Alison reasons in this way "we find" says he,

that these indurations contain a greatly increased amount of matter, and that this matter is harder than the healthy tissue... how this increase of substance implies, either increased secretion, or diminished absorption. That absorption is not diminished in the tissue is plain from the fact, that portions of the healthy texture are at the same time removed by this process, around the indurations. That increased secretion is present, is proved by the fact, that the indurated texture presents new characters, and is not a simple accumulation of the matter of the natural tissue.

Now, argues he, to produce an increase in the nutritive secretion there must, according to a well established pathological law, be an increased determination of blood to the part. Taking this premise thus wrought out, he proceeds to apply it, in the following manner. Let us see whether increased

determination of blood in other cases, leads to the production of matter like that of the indurations.

Acute inflammation of the Pleura, causes an overflow of the nutritive secretion, in the form of coagulable lymph, which may soon become well organised into a soft cellular, or serous membrane. but when the inflammation is of a lower and more chronic character, the effused matter is slower in the process of organization, and forms a harder texture, of lower vitality, a kind of fibrous or fibro-cartilaginous structure. In these bloodless and almost cartilaginous portions, we see the exact characters of the matter, of which, the miliary granulations or gray miliary tubercles are minute samples.

Although we can agree, in the main, with the distinguished writers, who maintain this opinion, yet we would beg leave to differ in some respects from them, and for these

reasons— If the deposition of tubercle is caused by chronic inflammation, chronic inflammation ought always to cause it, we conceive this to be a self evident truth, and yet who will assert that this is the case. How many cases of chronic inflammation could be cited to prove, that such was not the result, for instance, chronic rheumatism, chronic bronchitis, conjunctivitis, gastritis— Diarrhœa and a host of other inflammations where we do not find tubercular deposition; there must be some other cause. In addition to this, have we not found tubercles in the fœtus? Our remarks upon this will also bear upon the character of the secretion itself. They assert that the effused, (we prefer the term secreted,) matter is slower in the process of organisation and forms a harder texture of lower vitality.— now we think that this is entirely inconsistent with the modern views, which

we have of the pathology of tubercle, but with their own definitions; — when these men define tubercle they say that it is a secretion, unsusceptible of organization and consequently is a morbid compound capable of undergoing no change that is not induced in it by external agents, Their language is entirely inconsistent, at one time calling it an unorganized secretion and not susceptible of organisation, and the next moment, saying, that it is "lower in the process of organization and of lower vitality"

Vitality, no matter how low, implies organisation, and organization implies the power of generating and multiplying. Has tubercle this power, or have we not before clearly shown, that on the contrary its tendency is to soften down and degenerate? It appears to us, that there is a glaring inconsistency here. And

further, it has been compared to the fibrine thrown out in Pleurisy. that the adhesions are of a higher vitality, but that if the inflammation continues and becomes chronic, then we have lymph of a lower vitality, and this is compared to tubercle. This is all gratuitous, We ask what properties, beside induration and consistence, have these productions which are similar to tubercle? Does their chemical composition agree? We believe they do not, Does this organizable lymph ever soften down and become as yellow tubercular matter? no. Then where is the analogy. We must certainly look for the source of tubercle elsewhere. It presents none of the habitudes of lymph. We often find acute inflammation taking place in the lungs, and the rapid deposition of tubercle. Here certainly, if

ever, we ought sometimes to meet with fibrinous masses of a high state of vitality, but do we? Are not those deposited under these circumstances, the identical tubercles, which are deposited under chronic inflammation? and yet they can gravely discuss acute phthisis, and never think of saying, that in this case, according to our analogy, we will find tubercles composed of highly organised lymph such as, we find thrown out from the pleura under acute inflammation!

We take two individuals, both are attacked with inflammation of the lung. both fall victims. We examine the lungs of both, the one presents us with hepatisation without tubercles, the other has his lungs studded with them. Why is there a difference? so with every other organ which is liable to tubercular deposition.

Without pursuing this further, we will, with all humility and modesty, offer our dissent, that chronic inflammation is the cause of tubercular deposition, or in other words, that it is produced by an increased flow of blood to the part, and also from the corollary to the proposition, that the tubercle thus caused is, merely, a mass of lymph, or fibrine of a low order of vitality. Where is its source then, and what is it?

To the first question we answer,—the blood; From late analysis it has been found, that the blood possesses less plastic power, and is very deficient in nutritive matter. It possesses also, we believe, a substance sui generis and this is tuberculous matter. We have in a former part of our thesis given its chemical composition, which is different from all other compounds in the body, it is a secretion entirely differing

from all others, and only found in the blood of those, who are of a peculiar habit, which we call tubercular. It is just as distinct a secretion as, the mucous and serous secretions. And hence we believe, that a healthy secreting surface may separate from this blood, not only the materials for its own peculiar secretion, but also those of tuberculous matter.

That it is different from all others can be very readily proven. all will admit that it differs from the mucous, serous, salivary, biliary, renal, uterine, pancreatic secretions, and we have taken the trouble to show, that it differs from fibrine in its chemical composition, and in its properties, the only points of resemblance, that can by possibility be made out, are that they are both of a firm hard consistency, and that they look alike. The third proposition that

it is only found in the blood of those, who are of a peculiar habit of body, can be proven, by thousands of cases, the fact is, it is admitted even by those, who deny that it is a secretion, that this deposition only occurs in those of a tuberculous constitution, and it is the only way, in which, we can account for the fact, that although different individuals may be subjected to the same inflammations, yet in one case, there will be no tubercles found, and in the other, a great number. And the last proposition that a healthy secreting surface may not only separate the material for its own peculiar secretion, but also those for tuberculous matter, is easily established. examine, for instance, the peritoneum, in this disease, first, we will find, on one portion of the membrane, a quantity of recently effused coagulable lymph; secondly on

another, we find the same plastic semi-transparent substance, partly organized and including within it, or surrounding a globular mass of tuberculous matter; and, on another part, the coagulable lymph is found, converted into a vascular or pale cellular tissue, covered by an accidental serous membrane, beneath which, and external to the peritoneum, or on the secreting surface the tuberculous matter is situated, resembling in colour and consistence pale firm cheese.

Here, we see that not only is the tuberculous matter secreted, but also another substance, — lymph, that its separation from the blood may be accompanied by that of natural, or other morbid secretions, and it also strikingly proves, that the doctrine, which teaches, that tubercle is nothing more than fibrine of a low order of vitality, is inconsistent and untenable.

For it would be the height of absurdity to say, that under the same inflammation and in the same spot, we could have a mass of fibrine thrown out, with little or no organization and vitality, and another mass surrounding it, organised and of a different grade of vitality, and yet, we have this state of things existing here. We will now follow tubercle into its next stage, which Laennec calls, the second stage. As the tubercular deposit is unorganised, the tendency is of course to decomposition, it has nothing within it, no principle of vitality to resist decomposition, it is perfectly dead inert matter, and undergoes just the same changes internally, as it would if at first taken out of the lung, and exposed to the action of warmth and moisture, and the reason why the process is longer internally than it would be externally, is because it is

better protected from the decomposing agents, and all this palaver about the new structure, evolving in the looser parts of its substance, a still less organic form of albuminous matter, is all nonsense, and the remaining part of the explanation, which is thus gravely given, by a distinguished writer, superlatively ridiculous, and without the shadow of any thing like proof. he says. But as this cannot be thrown off, it presses on its indurated matrix, and causing its absorption, accumulates in its place: Thus is effected the conversion of the gray induration into yellow tubercle- Bodigious! How easily can some pathologists flourish off an explanation, to favour some favourite theory— and solve difficulties by the mere exercise of imagination. We unhesitatingly affirm that this is not only not the case, but

also that there is not the slightest data for such a theory, and further, that all reason and philosophy is opposed to it.

We hardly know wether it is worth our while to argue this point gravely, or not, it is so palpably untrue.

By this, they give to the tubercle, a power of secreting a substance similar to itself, but of a lower organisation. observe, the new structure evolves (secretes) a still less organic form of albuminous matter. It strikes our minds that, that body which has the power of secreting any substance, even should it be inferiour to itself, is one which possesses no mean powers of vitality, and no very low organisation, in fact, it makes it a perfect organ! for observe again, what is stated. this new structure not only evolves in the looser parts of its sub-

tance a still less organic form of albuminous matter, but this new substance of a lower vitality being created, presses on the indurated matrix. Here is a new and additional quantity of matter thrown into the tubercle, giving it the power of secretion and of course, secreting vessels! but also they add that, this pressing upon the indurated matrix causes absorption! absorbed, by what? why absorbent vessels of course! Here we have a perfect organ having eccermant and absorbent vessels, created by the fertile imaginations of these grave pathologists! wonderful that men should fall into such glaring inconsistencies and errors! and then they go on to say that "this entirely inorganised substance, acting as a foreign body on the adjoining tissues irritation, ulceration and the effusion of serum and pus which softens and

breaks up the crude tubercle into the curdy grumous matter of the mature tubercle." This is altogether untenable, & the view which Dr Carswell has taken of this stage of tubercle, and which, we have given is undoubtedly the most consistent with sound pathology.

The process of softening begins on the surface of the tubercle. Laennec and others have been led into error, when they supposed, that it begins to soften at the centre, the deception resulted in this manner, when tuberculous matter is formed in the lungs, it is generally contained in the air-cells and bronchi, If therefore this morbid product is confined to the surface of either, or has accumulated to such a degree, as to leave only a limited central portion of their cavities unoccupied, it is obvious, that, when divided transversely

the following appearances will be observed. 1st the bronchial tube will resemble a tubercle, having a central depression, or soft central point, in consequence of the centre of the bronchus not being occupied, by tuberculous matter, and of its containing, at the same time, a small quantity of mucous. 2dly the air-cells will exhibit a number of similar appearances or ring of tuberculous matter, containing in their centres the same kinds of fluids.

Thus much we have written with regard to the pathology of a disease, which carries off millions of the human race, we regret that so little is known here, and that the little that is known, is so obscured and perverted, by inconsistent and unphilosophical theories, and conjectures. We have seen fit to differ from some very distinguished writers, but have

done so with all deference to their superiour learning and experience, but in this as well as in other branches of our divine science, we choose to follow no other lights but those which are given by Reason & sound Philosophy.

An

Inaugural Dissertation.

On some of

The Atmospherical Causes of Disease.

Submitted to the Examination

of the

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of the

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for the

Degree of Doctor of Medicine.

By James Morison,

of New Hampshire.

Oct. 10. 1846.

Every thing around us may excite morbid action. Accidents, changes in the atmosphere and in the seasons, food and drink, passions and emotions of the mind, each and all may become the cause of disease: and if we escape all these there is a hereditary cause. When we consider how many influences are constantly operating around and within us, we cannot be surprised at the declaration of one Jewish writer that these joined effects upon one system

"Strange that a host of thousand things
Should keep in time so long."

It is our aim in this essay to consider some of the atmospherical causes of disease; the conditions of the atmosphere detrimental to health, and the modus operandi, so far as ascertained, of each one of these

conditions in the production of disease.

The atmosphere, which surrounds the earth, and which is so well adapted to the purposes of respiration and the support of animal and vegetable life, is composed of one part of oxygen to four of nitrogen. It, also, has about one part in a thousand of carbonic acid. Besides these, its essential constituents, which have invariably been found combined in the same proportions, it contains moisture, caloric, electricity and many matters arising from the earth. It is well worth our attention to consider the atmosphere in reference to its accidental conditions, as depending on the moisture, caloric and electricity it contains, rather than its essential principles, which do not change.

The human system is affected by the materials which surround it, through

the absorbent and exhalent tissue. The external portion of this tissue is in contact with the air, and the heat, light, and moisture and electricity which the air contains. The internal [illegible] comprehends the laryngo-bronchial mucous membrane, which is impressed by the atmosphere and the substances mingled with it, and the intestinal mucous membrane, on which food medicines &c, act. and the mucous membrane of the urinary passages and the uterus. The air acts upon the skin, the conjunctiva, the mucous membrane of the nares, larynx, trachea and the bronchia and their minute ramifications. Its influence is not limited to these tissues, but is extended to the vessels and nerves connected with them different parts. It acts upon the lungs and blood-vessels, and through them upon the whole animal economy.

There is no agent more general and important in its action on the human system than the atmosphere. It was regarded by the ancients as the pure of life. Though they had not analysed it, and discovered its constituents by chemical tests they were not ignorant of its perfect adaptation to all the purposes of respiration, and the absolute necessity of it for the support of animal and vegetable life.

To observation and induction, which have accomplished so much for the advancement of the natural Sciences, we are indebted for whatever knowledge we have of the effects of different states of the atmosphere upon the human frame.

The atmosphere may first be considered in relation to its density and diminution of density.

The barometer varies from 28 to 31 inches.

The human frame is not likely to suffer between these extremes, unless the change is sudden.

Our means for ascertaining the effects of increased density of the atmosphere are so limited that little satisfaction has been received by the experiments that have been tried. It is, however, reasonable to suppose that the respiration will be slower, since the same quantity of oxygen will be contained in smaller bulk. The respiration will also be more constrained by the greater density of the air.

More opportunities are furnished for observing the effects of diminished density. These effects may be seen in the experiments made by the air-pump, and in ascending great heights by balloons, and by lofty mountains. The pressure of the atmosphere

prevents the escape of fluids from the vessels of the body in which they are contained, and if this pressure is removed hemorrhages will follow from those vessels which are the least protected. This is exemplified by the effects of a cupping glass over a part of the body. In a rare atmosphere the respiration is more rapid, as a greater quantity of air is required to produce the same effects in supplying the wants of the system. Hence it is evident that a rare state of the atmosphere is unfavorable to those who are predisposed to pulmonary affections or to hemorrhages from the mucous membranes. Greater mechanical action of the lungs will be required, and, the accustomed pressure being taken away, the fluids will burst forth from those vessels to which they have been confined. So few

individuals are subjected to these changes that they seldom give rise to disease.

Changes in temperature are a much more common cause of diseased action. The human body may be exposed to great changes in the temperature of the atmosphere without much variation of its own temperature. Navigators have experienced excessive degrees of cold, in the northern regions, without producing detrimental effects on their health. The body may suffer, however a certain abstraction of heat, even for a considerable time, with impunity.

On the other hand continued exposure to the elevated temperature of torrid regions is positively injurious to health. The constant evaporation keeps the absorbents of the intestines in a state of inactive excitement, and they consequently assume a morbid condition. This

occasions the various derangements in the mucous membrane of the intestinal canal. which occur so often in warm climates and seasons.

Hepatic and splenic diseases may be regarded as the diseases of warm climates. which are produced by the irregular action of the skin and mucous membrane In some parts of Europe. where the liver of the goose is considered a great luxury. it is enlarged by producing an artificial. or rather a real disease. by heat and food The excessive temperature. to which it is exposed diminishes the nervous energy. so that the digestive organ is unable to act with the necessary efficiency. The food consequently passes into the small intestines. and the irritation excited is communicated by the biliary duct to the liver and engorgement and hypertrophy of that organ follows.

It has been ascertained by Experiment that the quantity of Oxygen is increased by an elevation of temperature, and the venous blood is not of so dark colour as is usual, and it shows by its florid colour that little change has taken place in the course of its circulation.

The venous influence is greatly diminished whenever the body is exposed to great heat, and the dyspnoea and sense of suffocation, following under such circumstances, are probably to be referred to the debility of the respiratory muscles, in consequence of the enervating effects of an elevated temperature on the brain. In this manner the great lassitude induced by Summer heats is to be accounted for. From what has been said it may be inferred that a high temperature is especially

unfavorable to those, who are predisposed to diseases of the brain and nervous system. Rheumatism appears to be the only disease benefited by a warm climate, unless we except phthisis, which, though not communicated from the system, is often delayed in its march by a change to a climate of a milder and less variable temperature.

The effects of a moderately cold temperature are the opposite of those of a warm. It is exciting and agreeable to the young and vigorous. Its first effect is to diminish the circulation in the capillary vessels of the surface, but reaction soon succeeds and an agreeable sensation follows. The action produced on the extremities of the nerves is communicated to the brain, and all its functions consequently act with more vigor and efficiency.

Whenever the body is subjected to so low a temperature, that it is unable to counteract its influence, the Skin assumes the appearance, which has been denominated Cutis anserina: the blood is forced into the interior of the frame, and inflammatory affections are apt to follow in the air tubes and other internal organs. From this cause arise those forms of ~~disease~~ inflammatory diseases which prevail during the Colder seasons, and which more especially attack the aged and the less vigorous, whose systems have not sufficient vigor to counteract the depressing influence of Cold and the vicissitudes of the seasons.

The hydrometric condition of the atmosphere next demands our attention. If the air is dry its power of absorption is increased, and the

the perspiration, on the surface of our bodies, evaporates so soon as it is secreted. The opposite effect takes place when the atmosphere is charged with moisture, and the perspirable matter accumulates on the surface of the body. The action of the cutaneous is increased in the one case, and diminished in the other. It is for this reason that we appear to perspire more when the air is moist and warm, than when it is hotter and drier, while we, in fact, perspire less. If the air is charged with moisture in warm weather, we feel languid and listless, and incapable of making any mental or physical exertions.

The atmosphere also becomes a better conductor of caloric when filled with moisture, than in a dry state, and we feel more chilly than at the same

temperature when it is less moist, and we are consequently more liable to have those irregular actions of the capillary system induced, which give rise to inflamatory disorders, especially of the mucous membrane. Hence a physician in extensive practice may calculate, almost with mathematical exactness certainty, upon meeting some cases of acute inflamatory disease after a few days of cool, damp weather.

When the air is too dry a painful sensation is experienced by many persons. This sensation is often felt in close rooms heated by a stove. The air in this state acts as an irritant on the mucous and cutaneous surfaces, and is especially detrimental to excoriated and inflamed surfaces.

The decay of animal and vegetable substances is much modified by the state of the atmosphere, and is greatly increased

by warmth and moisture. These two conditions act efficiently in the diffusion of the solatile principle. How agreeable it is to go forth after a summer's shower, and inhale the air charged with the fragrance of flowers! Who has not experienced the peculiarly pleasant sensations excited by this state of the atmosphere! It furnishes a charm to the life of him who loves the country with its fields and groves, its flowery meads and verdant plains, its running ~~streams~~ and murmuring streams and still, silent lakes: its gentle declivities and abrupt mountain heights. Who does not love to inhale

"The 'foles that catch the scent of blooming groves."

It renders the spirits buoyant and free and gives a zest to all around us.

Sudden changes in the atmosphere have an important influence on the animal economy. These changes cannot

pass unnoticed since they are so strongly impressed on the senses. The system may adapt itself to great degrees of heat and cold for several days in succession; but it cannot, if at all delicate, be exposed to sudden changes with impunity. There is such a sympathy between the different parts of the human system that not one part can be disturbed without the other parts participating in the disordered action excited.

"Man is a harp, whose chords elude the sight
Each yielding harmony disposed aright;
The screws reverse'd, (a task which if he please
God in a moment executes with ease)
Ten thousand thousand springs at once go loose,
Lost, till he tune them, all their power and use."

If twenty persons are exposed to the same exciting cause of disease, we can by no means predict the morbid action which will be excited in each

in each particular case. Here some of them will probably have some form of inflamation. One may have inflamation of the bowels another of the pleura another of the bronchiae and so on, according as they are predisposed to any of these inflamatory actions.

There is less danger in passing into the open air whilst the system is much heated, than after it has become cool. While the skin is hot the whole capillary system is in an active state and is consequently better able to resist the depressing effects of cold than after the activity of the vessels has began to subside.

The changes from cold to heat are to be considered in relation to their effects rather than as being the exciting cause of disease. If, for instance, a frozen member be subjected to the

influence of heat inflamation will follow as a consequence of the vessels being impervious to blood, and the nervous energy being temporarily destroyed. The unfortunate Russian Campaign furnishes many examples of the disastrous effects of changes from cold to heat.

Light exerts an important influence on the animal economy. It acts as a stimulant on the skin and especially on the eye. Its absence is unfavorable to the growth both of the animal and vegetable kingdom. We require no more marked proof of this than the contrast presented in the mental and physical developement between of those who have been subjected to the influence of the pure country air under the broad light of the sun, and those who live in the narrow

lanes of our large cities, where they are in a great measure excluded from the light, and the contrast is more marked when we take those wretched creatures who drag out a miserable existence within the gloomy shades of a dungeon's walls, or that other numerous class more deserving of our commiseration, who search for hidden treasures within the bowels of the earth. It has been sufficiently proved by experiment and observation that light is indispensable to the full development of our mental and physical powers, and that the absence of it tends to malformation and disease.

The electrical condition of the atmosphere is regarded by many as intimately connected with disease the performance of the several

of the animal functions, and by consequence as being a powerful agent in the production of disease, and in maintaining a healthy state of the system. Some more distinguished for their enthusiasm than philosophical strictness, contend that it is electricity which constitutes the living principle: that health depends upon the establishment of an equilibrium between the electrical fluids, and that disease is produced by the disturbance of this equilibrium. Such hypotheses are worthy of our attention, only as showing the folly and extravagance of the human mind, and its inclination to indulge in wild speculations on those subjects which lie beyond the reach of our investigations. Setting aside the question of its being so intimately connected with our existence we do not doubt that

it has an important effect on the animal economy.

It has been proved by experiment that a constant development of electricity is going on in the human frame. which is modified by the electrical condition of the atmosphere. If the air is very dry, while the clouds are high, all electrical communication between the clouds and the earth is cut off, and no electrical phenomena take place. Under such circumstances we feel full of energy and electricity. An opposite state of feeling is the consequence of the air being filled with moisture, when it becomes a good conductor of electricity and forms a free communication between the earth and the clouds.

The facts that have been collected are not such as to warrant one coming to any definite conclusion in relation

to the precise influence exerted by this agent on the human system. Often, however, are disturbed functions of the animal economy produced by the electrical condition of the atmosphere. In some delicate and nervous individuals head-aches, pains in the limbs and shooting pains are uniformly produced by a thunder shower.

We have endeavored to state explicitly the different states of the atmosphere which exert an undoubted influence on the animal economy, to trace out, as far as the inquiry has been able to determine, the manner this influence is exerted and the rationale of the process by which it produces its effects.

How intimately is the atmosphere connected with the support of life, the preservation of health and the production of disease! There is no agent the properties

conditions and effects of which it is more important that the physician should be acquainted with than this. A regard to humanity should prompt him to caution all, within the sphere of his influence, respecting the exciting causes of disease. In this way he may do much to arrest the progress of disease, and confer a benefit on mankind which will contribute more to the human happiness and to his own satisfaction than to have been instrumental in eliminating from the system that disease which he might have prevented.

An

Inaugural Dissertation

on the

History of Surgery

Submitted to Examination of the Provost

Regents and Faculty of Physic

of the

University of Maryland

for the Degree

of

Doctor of Medicine

by

Charles. H. Hill

of

Maryland

To

Nathan R Smith M.D.

whose

Talents and Urbanity

have

placed him foremost

in a most

useful Profession

This

Dissertation

is

most Respectfully

Inscribed

The Author

History of Surgery

Surgery, compounded of χειρ, & εργον, is that branch of the medical profession wherein manual operations form part of the occupation of the practitioner, & which for centuries constituted the exclusive province of the individual who professed it. Although there cannot be a shadow of doubt that surgery was at least coeval with Medicine, yet there is no account of any such operations before the seige of Troy, when that eventful strife immortalized in song the chirurgical deeds of Patroclus, as well as those of Podalirius & Machaon the godlike sons of Aesculapius, for in that mortal contest, the chiefs were as much renowned for their achievements in surgery as in war.

Aesculapius lived about the beginning of the Trojan war, & was instructed in medicine and surgery by Apollo and the Thessalian Chiron named also the Centaur. According to Diodorus Siculus, Aesculapius

was the inventor of medicine and surgery, performed operations, & carried both any to perfection, as well as the use of medicines. In the earliest age all parts of medicine were practised by one individual, and that person was either a hero, a demigod, or a prince.

When we consider the reckless spirit of untutored man, it is to be presumed that wounds, fractures & dislocations existed from the creation, and that consequently many surgical remedies originated nearly at the same time, for surgery & medicine must have been simultaneous with injuries & diseases.

From the fall of Troy, an interval of seven hundred years, to the Peloponesian war, ~~[illegible]~~ which was four hundred and thirty one years before the Christian era, we have no account of surgery; it is only known that Asclepiades practised the art. The

great Hippocrates, also a lineal descendant of Aesculapius, appeared at that time, and has handed down to us works not less celebrated in Surgery than in Medicine.

In Egypt, according to Herodotus, surgeons were divided, as in the present day into Oculists, Captists dentists, &c.; & in Persia, A. M. 3483, the surgeons of Egypt were held in high repute. Democedes is mentioned as having become the principal favourite of Darius and having succeeded in reducing the dislocated ankle Joint of the Monarch. Xenophon states, that Cyrus had an excellently appointed medical staff. About five hundred years before Christ, the celebrated school of of Alexandria flourished, at which Herophilus & Erasistratus had the boldness to introduce the source of all its renown, the study of human Anatomy; but in consequence of the destruction of

the Alexandrian library, we possess few of the writings of these great men. They were the founders of particular sects. Galen and Coelius Aurelianus collected the scattered remains of their works, together with those of the other successors of Hippocrates. It is natural to suppose that Surgery was far advanced during the reign of the Alexandrian school, when we consider the advantages derived from dissection, and the many opportunities of practice which must have occurred in the campaigns of Alexander and his successors.

In Greece, during the time of Herophilus, there were Dietetic, Pharmaceutic, & operative practitioners; the Surgeon was restricted to the use of the knife, and was not even permitted to treat wounds, ulcers, or tumours. At this time prevailed the famous sects of empirics dogmatists &c. Agathus, a Greek, was the first who performed operations at Rome, U. C.

five hundred and thirty five, but he operated so unskilfully that he received the appellation of executioner. Celsus who lived during the empire of Augustus and Tiberius, greatly advanced both medicine and surgery, and condensed all that was then known into one small volume. Galen was the last Author of distinction that practiced physic and Surgery at Rome, A.D. one hundred and sixty, he was educated at the Alexandrian school. Paulus AEgineta, who lived in six hundred and forty, and practised at Alexandria and Rome wrote an excellent work on surgery, containing all the improvements of his day.

Nothing but a chaos presents from this time to the beginning of the tenth century. Tonents of northern barbarians inundated the Roman Empire, and swept civilization from the fairest provinces of Europe; and an almost immediate

succession, the hosts of Saracens under Amron, viceroy of Egypt, set fire to the noblest monument of Antiquity the Alexandrian libiary. Thus nearly for Three Centuries, were buried in oblivion, sciend literature and art, while war and all its attendant honors raged from the Eux ine to the Atlantic.

The Arabians, at last contented with their conquests, requested, in eight hundred and twenty the Greek Emperor to give them some of the best literary and scientific works. Among these were Galens, translated into the Syrian language, in which astrology and superstition were mingled with medicine. In the works of Rhazes, Haly abbas, and Avicenna, we have no remarks concerning Surgery, which are not found in Galen, excepting those relating to Spina ventosa. Shortly afterwards Aven zoar and Albucasis wrote on Surgery.

In consequence of the despotism which over

whelmed Europe, all knowledge remained in obscurity; and even in Greece, theological controversies absorbed all other pursuits, until the middle of fifteenth century, when it began slowly to revive. In England, it was actually near the end of the fifteenth century before Medicine was cultivated as a science at Oxford; and even at the medical schools on the continent, the diploma of surgery was conferred after one year's study of Anatomy. At the famous school of Salernum, where this law existed, and where there was compiled a system of medicine, entitled "Schola Salcritana" only one chapter is devoted to surgery and that on fistulas. The degrees of bachelor & doctor had no doubt been conferred at Paris during the reign of Charlemagne, but genually on the clergy and monks, who practised physic at this epoch, and who were, in consequence of the barbarous anethemata pronounced

by the council, of Tours, in eleven hundred and sixty three, prohibited from performing operations; in consequence of this, surgery was again formerly separated from medicine, and practised only by the most illiterate of the laity.

"Ecclesia abhonet a Sanguine" continued long a reason for preventing the study either of Anatomy or the practice of Surgery. Gilbertus Anglicus is the first who wrote on surgery in England, which was about the year thirteen hundred; he copied chiefly Rhazes. Bernardus Gordon a native of scotland, and John of Ardern, are said to have flowrished at this time; the latter wrote a work entitled the Chirurgery. from the tenth to the middle of the fifteenth century, numerous works were published, but all more compilations, or extracts from Arabian authors; we ought to except perhaps however, a treatise on Surgery, by Guido

de Cauliaco or Guy de Chauliac, prof
essor at Montpelier, who lived at Avi
gnon in Thirteen hundred and sixty th
ree, which continued for many yeans the
standard work in France; for from th
is time until the day of the great Paré
Surgery was degraded to the lowest possible
state. Paré in the first editions of his
works, styles himself "Barbier Chirurgeon"
. There were then bitter controversies carried
on between the Clerical Physicians and
the unfortunate Barber Surgeons.
Vidus Vidius published a splendid La
tin edition of Greek surgery in fifteen
hundred and forty four. The great Pa
ré enlightened by the works of Vesalius, Fa
llopius, and Eustachius, wrote in fifteen
hundred and eighty five an able work on
surgery, founded on Anatomy, which h
ad been previously published in separa
te treatises. An in fifteen hundred
and sixty one Pierre Franco, a celebrat

ed Lithotomist, published "Traite des Hernies, de la Pierre de la Cataract des Autres Maladies des Yeux", a work of consid erable merit. In Italy There were seve ral authors. In fifteen hundred and sixty three, Fallopius an excellent Anat omist wrote a treatise "De ulceribus et de Tumoribus praeter Naturam",. And in fif teen hundred and ninety seven Caspar T agliacotius wrote his remarkable work de Cantoum Insitione per Chirurgiam. M arcus Aurelius Severinus wrote several surgical treatises in sixteen hundred a nd thirteen; and in the same year, Fabricius ab Aquapendente a profound n aturalist and Physiologist, wrote a sys tem of surgery. In sixteen hundred and sixteen Ceasar Magathus wrote a treat ise on wounds; and Felix Platonus in sixteen hundred and fourteen, published "Observationes in Hominem Affectibus Plu risque", a work of considerable merit;

he is the first who treats of the maliguan t nature of Carcinoma. In sixteen hu ndred and forty four, T. Bartholinus wr ote a work on Aneurism.

In Germany and Switzerland Surgery was in the hands of quacks until sixteen hundred and forty one when Fabricius Hi ldanus and Scultetus flourished.

In Holland the same quackery predom inated until the days of Tulpius, J.V. Ho rne and Ruysh. In England the Co llege of Physicians was not founded unt il the reign of Henry VIij, in the begin ning of the sixteenth century; but Anat omy which furnishes the only sound pri nciples of both Medicine and Surgery, was not taught until the eighteenth c entury. Prior to this, the bishop of Lon don and the dean of Saint Pauls Sol d licences and diplomas to the Clergy, laity, and quacks, to practice Surgery and Physic. Bartholomews Hospital

was not erected until Henrys reign.
Surgery was then practised indiscriminately
by Barbers, Farriers, and Sow gelders. Both
in Paris and in London in the sixteenth
and even in the beginning of the seven-
teenth centuries the barbers and Surgeons
companies were incorporated. in Sixteen
hundred and seventy six Wiseman red-
deemed Surgery, by publishing the result
of his valuable observations during the civil
wars, in his work, termed "Several Chi
rurgical treatises". In France and
other countries many insulated works we
re published about this time. In six-
teen hundred and forty, Covillards
"Traite Methodique des principales
Operationes de Chirurgie". In sixtee
n hundred and eighty one F. Tolets
"Traite de la Lithotomie". Lambert
of Marseilles wrote an excellent work
on the diseases of the bones, also "Com
mentaires et Oeuvres Chirurgicales, in six

teen hundred and fifty Six and sixteen hundred and Seventy Seven.

The eighteenth century opens with an era truly astonishing when compared with the preceding. In France there were Mery, Dionis, Garengeot, La Faye, Lacat, La Motte, Louis, Maitre Jean, David, Heve Cosme, Poital, Ravaton, La Peronie, Quesnay, Faure, Morand, Sabatier, Poiteau, Moreau, Deschamps and Desault. France has just cause to boast of having given birth to so many able men.

Great Britain during this century produced Chesselden, Douglas, Monro primus et Secundus, Sharp, Cowper, Pott, Allanson, John Hunter, Hill, Warren, Ford, White, Broomfield, Ranby, Gooche, Park, Halloran, Dease, Latta, Benjamin Bell, John Bell, Charles Bell, and a number of others.

It may be interesting to make a few observations on the Changes or revolutions which

have taken place in the profession.
At the beginning of Medicine, one individual practised every department. It is evident that from Hippocrates universal knowledge he so excelled; and it could only have been from a conciencious feeling of the difficulties attendant on Lithotomy, that he separated it from the Surgery he wrote upon and practised. Surgery was then first partially separated from Medicine, which circumstance must have degraded it, as the physicians retained whatever was scientific. It appears indeed, to have continued in the lowest condition until the time of Celsus, who, from his writings embracing both departments, and since he was the companion of the first men in Rome, must undoubtedly have raised Surgery to a high rank in the estimation of the public. In consequence of dissection being proscribed at Rome, Surgery gradually sunk, and particularly

after the annihilation of the Alexandrian School, when it was again separated from medicine. We learn from the scattered fragments collected by Galen and Coelius Aurelianus, that Surgery must have arrived at great perfection and been in high repute during the flourishing state of that school, where dissection was sanctioned by the government. It is evident, that Surgery has only flourished in proportion as it was connected with ~~with~~ anatomical investigation, and enriched with pathological doctrines. At first it was combined with Medicine, and in the days of Herophilus, and Erasistratus, Celsus, and Galen, it was also united with medicine and Anatomy. After this when Anatomy could only be prosecuted by stealth, Surgery continued in a truly deplorable condition and in the eleventh century it was stigmatized by the Council of Tours. In the twelfth century the School of Salernum, and

also that of Naples, required only one years study of Anatomy for the diploma of Surgeon. In the fifteenth century we find the great Paré still a barber surgeon and controlled by the physicians. At Oxford and Edinburgh the two first universities in Great Britain, Anatomical Chairs were not established until the last century, and at neither school was dissection prosecuted until this Century, and that only at Edinburgh, where the study was not sanctioned by the government till within the last six years. So that it was only at the dawn of medicine and in the present era, that Surgery blended with physic, became a respectable profession. It is much to be regretted, that there is any separation as it only tends to depreciate each, as physicians must be consulted in accidents, the province of the surgeon, and the surgeon must be acquainted with the treatment of fever supervening to

Operation. All therefore, ought to have the same elementary education, and be qualified for every department.

The Operating Surgeon ought to dissect daily. Lately the College of Physicians of Edinburgh have wisely rescinded a law which prohibited their fellows from using the Lancet or Scalpel.

"Etenim omnes artes", says Cicero, "quæ ad humanitatem pertinent, habent, quasi vinculum commune".

An Inaugural Dissertation On Asthma.

Submitted for Examination
to the
Provost Regents
and
Faculty of Physic
of the
University of Maryland.

For the Degree of
Doctor of Medicine
By
Cary P. Gamble
Of
Florida.

The history of asthma has been so ably described by different authors that little remains for writers of the present day to do, but to compile and rearrange that which has been already written. This being the case, I have thought that it would not be inexpedient for me to deviate somewhat from the usual course of writers, and describe in a brief manner the anatomical and physiological condition of the parts most implicated in asthma; before proceeding to a description of the disease itself.

The Trachea has the form of a cylinder with its posterior third sliced away, extending from the fifth cervical vertebra to the sixth dorsal; it then divides into the bronchial tubes. The tissues entering into its composition are fibro Cartilaginous rings - a fibrous and a mucous

membrane - Muscular and longitudinal fibres - and a number of ovoidal shaped glands. The rings extend about two thirds of the circumference of the trachea, the remaining third being supplied by a fibrous membrane. Their posterior extremities are connected together by a distinct layer of elastic fibrous tissue, which anteriorly is scarcely perceptible - The muscular fibres also form a thin transverse layer between the posterior extremities of these cartilages, which, from a considerable size, gradually diminish until they become in the lungs imperceptible to the unassisted eye.
The longitudinal fibres assist the fibrous membrane in forming the posterior wall, and, as will be seen, give considerable contractile power to the trachea - The cartilages are possessed of elasticity and the power of contractility - ; which latter force is no doubt due to the membranes by which

they are connected.
The bronchial tubes are the continuation of the trachea, and in their structure do not differ essentially from their parent. The cartilaginous rings are much diminished in size, and are of thinner consistence. The muscular and fibrous coats present the same appearance excepting that they become thinner as the tubes approach the lungs. The longitudinal fibres become much more developed and completely surround the entire bronchus.
The lungs remain to be described, and in doing so their structure will be only spoken of. As seen by the unassisted eye, the lungs appear to be composed of Lobes & Lobules, which are connected together by a cellular tissue, and to consist of minute ramifications of the bronchial tubes, arteries, nerves, veins and lymphatics.

This is all that can be ocularly demonstrated, but by the aid of the microscope more important discoveries have been recently made known - The minute ramifications of the bronchial tubes terminate in air cells which form the cavity of the organ of respiration. A number of different speculations have been given as to the true manner in which the tubes terminated. Some authors suppose that they form vesicles with their inner surface ramified by the pulmonary artery - That these vesicles are cylindrical and do not communicate with each other. But omitting the different opinions of writers as being foreign to our subject, it may be only stated, that the opinion now most generally adopted, is that the bronchial tubes terminate in cells, one or more of which, may or may not communicate with each other; but there is no general opening between them.

whatever may be the ultimate arrangement of the pulmonary arteries and veins enough is known for it to be safely affirmed that the air of the cells has a ready communication with the arterial blood - but no visible openings have as yet been discovered -.

The physiology of Respiration -

Respiration consists in expiration and inspiration, and is accomplished principally by the dilatation and contraction of the walls of the thorax - During respiration the lungs are passive and the air within them is renewed by the external muscles of the thorax - The lungs in their healthy state completely fill the cavities of the pleura, and when these are enlarged a vacuum is produced, which must be filled by a corresponding enlargement of the lungs. This enlargement is caused by the passage of air to the remote air cells. The chest is dilated during inspiration mostly

by the contraction of the diaphragm - which assumes a flattened form. In common inspiration the diaphragm can carry on the necessary change of air -; but when a full inspiration is taken the chest is dilated laterally, as well as inferiorly. - This is effected by the intercostal muscles, the scalini serratide Expiration is effected chiefly by the contraction of the abdominal muscles, which force up the diaphragm by their pressure on the viscera; and depress the ribs - To this force is added that of Longissimus dorsi &c - Respiration is to a certain extent -, under the influence of the will, but - this volition can be carried only to a limited extent -; and for this reason the muscles of respiration are termed mixed -

As the nerves have considerable influence in the production of Asthma, I will give an account of the result of some experiments by Dr Reid.]

Dr Reid found that when the Par Vagum was divided the number of Respiratory movements was diminished to about one half the original number; and any irritation of its trunk was followed by an act of inspiration. Thus proving that it is one of the Excitors of Respiration. It was farther shewn that if in addition to this the encephalon be removed, the number of Respiratory movements is ~~Reduced still~~ farther diminished. But from the fact that Respiration is still continued it is evident that these are not the sole excitors. From farther experiments Dr Reid thought that the great sympathetic is also one of the Excitors of Respiration. The motor nerves of Respiration are the Phrenic, Intercostals, Facial, and Spinal accessory. It has been also proved that the inferior laryngeal is the motor nerve to nearly all the laryngeal muscles; and that the Superior is the excitor.

If the inferior nerve be cut, there will result a paralyzed state of its muscles, & if the part be much irritated suffocation will ensue - When a stimulus is applied to the nerve it will cause a distinct muscular contraction in the larynx - a corresponding stimulus to the superior laryngeal will occasion muscular movements only in the crico-thyroid muscles It is then proved, by Dr Reid, that these nerves are the incident and motor nerves of the glottis To recapitulate what has been said - The lungs are known to consist of congeries of minute air cells, whose cavities possess the power of dilatation and contraction - The pulmonary plexus of vessels are distributed on their walls. The bronchiae tubes have a distinct muscular contractile

power - The air tubes are endowed with irritability, as can be shown by the application of any stimulus to their mucous surface, or to the nerves that supply them. The irritability of the bronchial muscles is found to be diminished by the repetition of any stimulus; but is restored again on allowing the parts to rest. When the stimulus is continued for any length of time the contractile tissue passes into a state somewhat resembling tonic contraction of muscular fibres.

The term Asthma - like that of fever, is commonly applied by the vulgar to diseases widely differing in history & treatment. With them all kinds of difficult breathing is classed under the broad name of asthma. It is true, as Dr Watson remarks, that Asthma is dyspnœa, but dyspnœa is not necessarily asthma -

Asthma is often a symptom of various diseases such as those of the heart-, as dropsy of the pericardium, hypertrophy of the heart-&c- of the Lungs, as Tubercular Phthisis, Pulmonary Emphysema, General forms of Bronchitis & Hydrothorax. In Ascites there is great dyspnœa, but- there is not necessarily asthma -

Asthma may result from the growth of tumours in the cranium, pressing upon the origin of the nerves that supply the bronchi, or upon the nerves exterior to the cranium or it may result from some nervous or rather spasmodic condition of the muscular fibres of the respiratory apparatus -

Disregarding the many spurious varieties of asthma, together with several others of a Catarrhal or nervous nature, I shall proceed to a description of the disease to which most properly belongs the term asthma

Spasmodic Asthma

The true pathology of asthma has been only recently understood, and even at present there are pathologists who entertain different opinions in regard to it. The cause of this diversity of opinions, can be no doubt attributed to the little light that is thrown upon the subject by post-mortem examinations. Various circumstances combine to present this otherwise most important & valuable source of information, from being of any importance in this affection. Among these causes, it may be stated that Asthmas as an idiopathic disease is seldom fatal in its early stage, & therefore no opportunity is offered for observing its simplest forms. The parts implicated are too minute for ordinary inspection, and from the nature of the disease, little or no organic lesion takes place in the parts. Hence there is but little pathological change

in the diseased parts, and a reference to what has been said of physiology of the nervious influence will suffice for the pathology.

It is a spasmodic disorder of the excito motory system of nerves, and, in the words of Dr Watson, "the Spasm may be centric or of eccentric origin. In the latter the par Vagum is doubtless the afferent nerve, and the impression it conveys to the medulla oblongata is reflected by motor nerves to the bronchial muscles. The centric variety results from a similar impression originating in the nervous centres".

There are two distinct stages or periods in an attack of asthma -
one consists in the attack of the paroxysm and the other is the interval of repose caused by the cessation of the paroxysm.
From what we have seen, we may affirm that the true pathology consists in

the successive contraction and relaxation of the muscular fibres that encircle the air tubes. It is proved to be a nervous or a spasmodic affection by its general history - as the suddenness of the attack and the subsidence of it afterwards - the character of the dyspnœa; state of the pulse, & other general symptoms.
The point now to be decided is, the particular seat of the disease.
It has been proved that the trachea & bronchi possess a distinct muscular structure, and that through the minute bronchial ramifications the entire lung is endowed with the power of dilatation entirely independent of the movements of the thorax.
The principal site of the spasm is in the air-passages.
It is contended by some writers that the external muscles of respiration are very much concerned; but close

dissensation has led to the opinion that these muscles are in truth opponents to the spasmodic action, and exert all their power to dilate the chest.

Among the proofs that the spasm is mostly seated in the air passages, it may be mentioned, that asthma is often dependent on a diseased state of the bronchial membrane — during the resolution of the attack there is generally a great increase of bronchial secretion - and finally the respiration in other diseases of the bronchi resemble that in asthma.

The physical signs are few and by no means pathognomonic

Altho' the air passages are the principal seat of the spasm, other parts are concerned - There is sometimes during a paroxysm, an involuntary spasm of some remote part. But in such cases it is secondary in its attack, & due to the reflex action of the nerves.

Symptoms.

The asthmatic has often warning of the approaching paroxysm. These warnings differ very much in their Symptoms and the period at which they appear - Commonly there is a general malaise - a depression of the spirits - a dread of coming evil, slight febrile sensations, heaviness of the head, contraction of the chest & a change of urine - These predisposing symptoms vary as to period & consistency of their appearance.

The paroxysm commences generally when the patient is in a sound sleep. and the first intimation he has of it is a feeling of suffocation almost depriving him of breath. The room appears to be too confined, and he often stands for hours in the coldest positions with perfect immunity from any dangerous consequences. While in this situation

his body is covered with a cold perspiration
while his extremities are cold -
His wheezing is so loud that it may be heard
at some distance - There is often a
discharge of pale urine. The countenance
of the sufferer is suffused - There is
a tickling dry cough - pulse often
varying from the healthy standard to
a hundred & twenty or even as high
as a hundred & forty -
I have seen it stated, however, that
the pulse remains unaltered throughout
the paroxysm -
On applying the ear to the chest
scarcely any sound of passing air is
heard - The violent action of the muscles
of inspiration diminish the entrance of air.
Laennec found that by causing the
patient to cease his exertions at breathing
the air would be again heard entering
into the lungs. Dr Williams thinks that
the cause of this, is a temporary relaxation

of a tonic spasm of muscular fibres, and this relaxation is owing to an increase of the foulness of the air within the bronchi. Altho' it seems to me that this theory is not very satisfactory, yet for want of a better I am forced to receive it.
After the paroxysm the patient is very weak and dejected. the cough which was before dry becomes loose and as health returns the expectoration of mucous becomes abundant.
the pulse continues rale for some days. The wheezing subsides, with less laborious breathing, and we again have the natural sound of respiration. The paroxysms may recur for several succeeding nights, the interval of repose becoming gradually longer until the healthy standard is restored.
During the intermission of the paroxysm the patient feels languid & depressed.

The Causes of asthma have been divided into predisposing & exciting. Most authors class hereditary transmission among the predisposing. This is no doubt true, but my little experience leads me to entertain a different opinion. There are many diseases that predispose to the production of asthma. Among these may be named all that directly affect the bronchial membrane, chronic affections of the stomach and bowels, diseases of the skin & uterine organs. Dyspepsia is a very prolific cause of asthma, its influence being due no doubt to the sympathetic action of the nervous system.

Plethora, corpulency, erysipelas, suppressed perspiration &c are mentioned among the predisposing causes

The exciting causes are very numerous, some authors having taken the trouble to enumerate above forty causes. But it is sufficient to say that among the most common are excesses of heat and cold. The cases that I have observed can very well endure great heat or cold; but are invariably affected by either when combined with moisture.

The asthmatic to possess a great susceptibility to any change of temperature. I have known an attack brought on by a change of temperature barely appreciable by the thermometer. Change of residence from a frame to a brick dwelling will sometimes induce the occurrence of an attack. In fact any deviation from the ordinary course of life renders the patient liable to an attack.

The unfortunate asthmatic may seek
in vain by the most rigorous course
of life and by avoiding every known
cause of disease, to protect himself
from his inveterate enemy.
In his most sanguine moments, when
he is congratulating himself upon
his prudence in shunning all
the known causes of his complaint
he has a recurrence of the malady.
It sometimes happens that the patient
after leading a life of extreme
self denial & prudence, becomes
desperate at the ill success that
rewards his labours, and, instead
of avoiding, seeks the causes of
his affection. Thus some have
chosen a rough life to the luxuries
of home & have been rewarded by
long intervals of exemption from
his disease.

The Prognosis of asthma, so far as regards its early mortality, is very favourable to the patient. But altho' it seldom destroys life, yet it often predisposes to some fatal disease of the chest.

Emphysema of the lungs is in nine cases out of ten a complication of asthma.

As a general rule the patient is suffered to drag out a miserable existence to an old age; often preferring death to a continuance of life.

I have briefly mentioned most of the complications of asthma.

All persons are liable to it; but it is more frequent in men than in women. in youth and middle age than in the extremes of life. It occurs most frequently about the age of puberty.

Treatment

From a knowledge of the pathology of this disease it is evident that there exists no radical cure. However disagreeable the fact, it is nevertheless true that in this, as many very many other affections - the power of our science fails most signally to work any cure - Medical treatment can do but little beyond palliating the disease when it occurs, and it wards it off for the time.

The treatment naturally resolves itself into that during the paroxysm & that during the interval -

To prevent an attack of Spasm the patient must avoid all known causes of his disease - pay great attention to diet living on easily digested food, Sponge the Body in cool water to lessen the morbid sensibility of the

bronchial membrane to cold.
He should remain much in the open air - use mild tonics &c
Galvinism & electricity have been tried, but found to possess but little efficacy in preventing an attack.
I have recently heard of a gentleman of this city who lived on a diet composed of coarse rye flour made into bread with sugar & cocoa - To this regimen he strictly adheres and has been known to be free from the disease for two or three years -
To shorten the duration of the a paroxysm, or rather of an attack the numerous Antispasmodics & Narcotics have been employed with advantage. Among the most important of these are Valerian, Assefoetida, Belladonna, Tobacco, fumes of Stramonium &c

A mixture of opium & Sulphuric ether, wine of ipicac, tinct of Castor, coffee and drinks of intensely cold water have been generally recommended. Paper soaked in Nitrate of Potass and then burned is said to possess the power of "clearing the passages and gradually opening the air tubes".
Lobelia Inflata is highly spoken of. Remedies unlimited in number & properties could be mentioned, but enough has been said for the present purpose.

An
Inaugural Dissertation
On
Mercury

Submitted to the examination
of
the Provost, Regents
and
Faculty of Physic
of the
University of Maryland
for the degree
of
Doctor of Medicine
By
Charles Hammond Hood
of
Somerset Ohio

1846

Mercury

This metal forms the basis of a class of compounds the most extensive and valuable in the Materia Medica.

There are few diseases to which the human body is liable at the present day, in which some of the preperations of this metal may not be advantageously administered at some period. And this opinion is strictly in accordance with that of a modern author of respectability who states that "Mercury may be most effectively employed in the form of its different preperations, as a sialagogue, an errhine, a cathartic, a stimulant, an anti-spasmodic, and an anthelmintic, and to the above observation may add, that in a large proportion of cases especially such as are of a sinister origin, its first action very frequently is that of an active emetic.

There are two modes in which mercury appears to act in producing its

effects upon the animal economy.

I It is absorbed into the circulation, and acts through the medium of the blood.

II It acts locally, by simply exciting an action in the parts to which it is directly applied.

In support of the foregoing positions, I shall call to my aid the observations and Experience of those, whose opportunities have been such as to place them before us in the attitude of reliable authorities.

That mercury when given in the ordinary way is absorbed into the circulation, has been proven satisfactorily by Experiments. Dr Hamilton detected globules of mercury in the milk of women in a state of salivation. It is also stated upon like credible authority that gold worn near the skin of persons taking mercury occasionally becomes coated with a white amalgam.

In addition, the absorption of mercury into the circulations, may be justly and clearly inferd from the peculiar me-talic taste upon the tongue, and the odour of the breath, and perspiration, of those under its specific influence; and finally, it is clearly proven by the fact that the External application of the remedy, is frequently followd by Salivation.

Mercury acts locally, by simply Exciting an action, on the parts to which it is directly applied. In Murrays ar-rangement of the materia Medica, Cathar-tics, are arrangd under the general head of local Stimulents; and this arrange-ment was adopted by Professor Chew, in his first Course of instruction in this department of Medical science. That the preperations of Mercury prove Cathar-tic, when Exibited in proper quantities is a truth Established in the Experience

of every prescriber. And Calomel in par-
-ticular has long been regarded as peculiar-
-ly valuable on account of its operation
in this way; but what the precise na-
-ture of the impression made upon the
stomach may be, I cannot determine.
this truth however is known as an Effect
that the secretions of the mucous lining
of the stomach & bowels are increased
and their peristaltic motion accelerated by
their action.

With regard to the sympathetic
effects of mercury. its operation in this
way as contended for by some writers
cannot I think be conclusively estab-
-lished, unless it be contended, that it
operates in this way, in producing its
Cathartic Effects, but in this respect
its operation in this way, is not to be
depended on or made the predicate of
our hopes of successfully exhibiting the
remedy. Eberle in his Chapter on

Cathartics, says, "with regard to the particular parts of the intestinal tube, upon which they more immediately exert their actions that Calomel, and a few others, direct their actions more particularly upon the upper portions of the intestines; not claiming that the impression made upon the Stomach, and upper portions of the intestines, are communicated sympathetically to the lower bowels. And further with this truth in mind Physicians, have long been in the habit of combining various other articles with mercurial purges, in order to ensure a thorough evacuation of the alimentary canal

The distinguish'd author before quoted, in treating this subject, quotes the observations of Dr Ives, because, they express in clear and concise terms, what he would wish to say upon the subject. he says "It has been shown by the

Experiments of Bichat and confirmed by daily observation, that the excretory action of glands is increased by stimulating the mouths of their Excretory ducts; and it is in this way that mercurial preparations usually excite their deobstruent Effects.

I shall not deny what has been shown by the Experiments of Bichat, and confirmed by daily observation: the views of our Author are doubtless correct in the premises, but in his conclusions he has certainly most strangely misconceived the truth. In the further examination of this point, we must inquire whether mercury given in the ordinary way, can be brought in contact with, and excite the mouths of the Excretory ducts of the whole glandular system, without having been first absorbed into the circulation: that it cannot, and does not, thus act without its being absorbed

I think is quite clear both in theory and fact. and being thus absorbed is it not more reasonable to conclude that it is brought in contact with the glands themselves and produces its Excitement in them primarily, and secondarily to perfect its action as a deobstruent. the Excitement is communicated to their Excretory ducts.

Again. I think our author has taken too much for granted on this point. Especially with regard to the Excretory ducts of the larger glandular bodies. which are essentially different both in structure, & function, and perhaps in physical sensibility, from the organs with which they communicate: and at most can only be regarded as a mere incident or appendage to them.

The same author, in the chapter before quoted, proceeds to claim for mercurials, a sympathetic action, still more extensive, in the following quotations.

"It is that which Mr Hunter, in order to illustrate the spread of disease, has denominated Continuous sympathy, and which Bichat has pointed out as being maintaind with peculiar vigour, between membranes, of the closest similarity of structure. In this way it seems that mercurial medicines when taken into the stomach extend their operations to other & distant portions, of the mucous membrane, producing an increasd discharge, from the kidneys, lungs, and skin",

The foregoing is hardly plausible in theory, and is certainly without the shadow of foundation in fact. For I do not believe that the experience of any physician, would authorize him to conclude, that mercurial medicines taken into the stomach extend their operations to other, and distant, portions of the mucous membrane, through any other medium that that of absorption

but to the Contrary, those secretions invariably remain unaffected by the remedy, until its Constitutional influence is Established

His idea of the sympathetic effects of Mercury, may justly be regarded as a hypocrisy, which can only Exist in the mild Conceptions, of imaginative Theorists, and if a sober thinking, and practical man, should imbibe the doctrine as Existing in Theory, he is he is sure to lay it aside, in his practical reflections and operations, as unworthy of confidence, and attention. Ebers himself, in speaking of Calomel as a purgative, says "It is one of the most important articles of the Materia Medica, whether we consider it in relation to its purgative Virtues, or, its more Extensive, and specific influence, upon the animal economy, under the head of Mercury" says he "I shall consider the remedial powers of

this article, so far as they depend upon
its Constitutional effects, and confine my-
-self on this place, merely to a consideration
-tion of its virtues as a purgative.
And here it is evident, that while
he acknowledges its Constitutional and
local action, he says nothing about
its sympathetic effects.

To Conclude what I have
to say upon this point, I shall quote
Dr Eberle M. S. Dispensatory, he says, "Of
the modus operandi of Mercury, we
know nothing, except that it probably
acts through the medium of the circu-
-lation. And that it possesses a peculiar
alterative power over the vital functions.
which enables it in many cases to sub-
-vert diseased actions, by substituting
its own in their stead". In the chapter
from which the above is a quotation, we
must admire the candour of the writer
and it commends him to our attention

and Confidence, being indispos'd, to indulge in speculations which might lead others into errors unpleasant in their circumstances, & disasterous in their Consequences.— In Conclusion on this subject, I am fully persuaded that all the immediate virtues of mercurials, as they have been Exibited to the profession, are clearly referable to their constitutional action, through the medium of absorption, or to their action upon the parts to which they have been immediately applied—

Mercury may prove remediate, First, by Exciting discharges from the bowels, and the various Excretory glands of the body, hence its utility in dropsy, dysentary, hepatitis, and the inflamatory diseases generally. Second by Equalizing the Circulation, and thereby, removing local Congestions. it is by an Effects of this kind, that mercury in general acts so beneficially

in fevers of a congestive character –
"the power which Calomel has in equalizing" says Dr Armstrong." is nowhere more con-
=spicuously display'd than in fevers of a congestive character. before its exibition. the skin will be cold, wan, and shrunk, the pulse feeble, or depress'd, and the whole system apparently relax'd. but as soon as the mouth is made sore from its influence, the skin becomes warm, reddish, and distended with a vigourous circu-
=lation, while the pulse is soft, & strong, and the general Energy in a great meas-
=ure repair'd"–

It has been long known, that mercury Exerts a specific stimulating influence, upon those organs whose func-
=tion it is to eliminate from the gen-
=eral circulation certain Excrementitious matters, upon the faithful performance of which is suspended the Enjoyment of health. and which in some

department, is more or less effected in every attack of disease, and it is to this enlightened view of the subject, and the judicious Exibition of the remedy in question, that practical medicine, in modern times, is largely indebted for its success-

In diseases of an acute & inflamatory character, the Exibition of mercury should be adapted to the urgency of the symptoms, and the force of diseased action - In such diseases as are characterized by violent initial symptoms, and are rapid and aggravated in their course, and speedily fatal in their termination, if not controll'd by remediate measures, mercury, if given at all, should be Exibited Early, and in large doses; an Excellent illustration of this truth, is found in the history of the treatment of the Yellow Fever, When given Early, and in large doses, frequently repeated, Calomel was often promptly effectual in arresting

the progress of the disease -

The necessity of large, and frequently repeated doses of Calomel in this disease, is a practical truth, not derived from experience alone, but may be justly & clearly infer'd, from a knowledge of its pathology-

That derangement of the nervous system, Constitutes the initial link in the Chain of morbid actions, which occur in the development of this and all other forms of febrile disease, is an admitted point at the present day- And the difference in the degree of violence, and fatality, observ'd in the different forms of fever, is principally referable, to the degree of Concentration and virulence, of the exciting Cause, primarily operating upon the nervous system - The history of the yellow fever, proves to us, that the nervous system must have suffer'd serious injury, if not an Entire destruction of its Energies

by the rapidity with which the stages of excitement and collapse followed the initial symptoms. And when we consider that the entire function of secretion wherever performed in the human organization, as well as that of absorption and assimilation, are almost entirely dependant upon the energies of the nervous system. And add to this the fact derived from the foregoing remarks, and besides take into the account the instantaneous, yea, the absolute necessity, of a degree of sensibility in its distribution, to the secretory and absorbent systems, adequate to the reception of impressions from remedial agents, in order to the production of their specific operations, we are inevitably led to the conclusion, not only, that what is to be done must be done quickly, but in addition in the Exhibition of our remedies we must make them commensurate in point of quantity & power to the injury the system

has suffer'd if we hope to succeed—

The principle I am attempting to establish, is further very aptly illustrated in the history and treatment Cholera.

The late learned and venerable Professor Potter, us'd to tell us, that the essential condition which obtain'd in this formidable malady, was an entire suspension of the secretory function, especially that of the Liver, which of necessity was speedily followed by congestions, Collapse, Coma, and Death, unless promptly, & efficiently treated. He frequently bled his patients, and always gave them a teaspoonful of Calomel, to begin with, and repeated it according to circumstances. and out of 127 Cases treated by him in that way, only three prov'd fatal, and they might have recover'd with such a treatment, if it could have been timely, and faithfully administer'd—

In the exhibition of mercurials, in the treat-
-ment of acute diseases, we generally expect
them to prove remediate, both by their
Cathartic and alterative action, and there-
=fore it is best to give them in full doses,
in Combination with such adjuvants, as
the circumstances of the case requires—

In the preceding pages, I have spo-
=ken only of the use of Mercurials in the
treatment of particular diseases by way
of illustrating the general principles which
should govern their use. I shall now
proceed to treat of their remediate vir-
=tues, in certain diseases, at some length,
and hope to be able to make my prac-
=tical precepts, Consistent with my the-
=oretical Views—

From what has been said with
regard to the action of Mercury upon the
Secretory System, we would naturally Con-
=clude, it is a valuable remedy in Hepatitis,
Either in the acute, or Chronic Form—

In the acute form, it is justly regarded as a principle remedy, after a proper impression has been made upon the system by bloodletting, mercurial purges, connected with proper counter irritation, will very generally speedily effect a cure— The late Professor Potter who was remarkable for being singularly upstreamish on some subjects, contended in his lectures, that in the disease in question, Calomel was no better the Epsom salts, and therefore not to be preferd to it or any other cathartic, but this opinion, so confidently expressed, and by one, so deservedly reputable both as a teacher, and practitioner of medicine, must be regarded as an Error, and by those of his class who were given to reflection, was justly Esteemd as such. For one thing we do know, that whatever will increase the natural secretion from any inflamd organ, or surface is both prophylactic, and curative in its

† That is by preventing functional, from pro-
= gressing to structural disease, and by
the relief it brings to the suffering member

operation? Now the whole matter rests upon this point. does Calomel increase the flow of bile, by a specific action upon the organ which secretes it. upon the solution of this question the whole matter is incontrovertably settled. There is also much respectable testimony in favour of the use of mercurial purges in this disease Professor Chew who was brought up at the feet of Potter so far as public instruction, in the theory and practice of medicine was concerned, held and taught, both in his public lectures, and private instructions, that a mercurial purge, was the best prescription, that could possibly be made, after blood had been efficiently abstracted

In the common Remitten[t] fever of our country, Calomel is a valuable remedy. Eberle gave it in this disease in purging doses. Harvey Enjoy'd the opportunity of seeing a good deal of this

disease, in all its grades of severity, I am clearly in favour of decided measures in its treatment. In the Northwestern part of Fairfield Co Ohio, where I resided three years it was Extensively prevalent Every season and with Considerably violence, the mild-er forms of the disease were easily manag-but the severer grades, required a very active treatment. It was my practice to follow the use of the Lancet with large doses of Calomel, frequently Commencing with a dose varying from half a dram to a dram, and I had the satisfaction of seeing my patients speedily recover.

But it may be inquired, would not a less active treatment have been as successful? observation answers the question in the negative — In what physicians Call the Congestive forms of remittent fever much if not Every thing in the treatment depends upon the judicious use of Calomel. and I am fully convinced that it is

impossible to treat successfully this disease, without the early and liberal use of this remedy—

Dysentary is another form of disease, in which mercurials are peculiarly valuable, Especially when it occurs in malarious districts. in such localities, the only appreciable difference between it and fever with abdominal disease, is, that no distinct remission or exacerbation can be noticed. What I have said with regard to use of Calomel in fever as a general rule, is applicable in the treatment of this disease, It should be given in full doses, and in combination with Opium. And the dose adapted to the violence of the symptoms. I have known a drachm of Calomel with three grains of Opium, to be given three times daily in this disease with very happy effects, while little does as a general rule, only aggravate the disease

for Pneumonia Biliosa, a disease of very common occurrence in some localities, during the months of February, March, and April. Calomel is a remedy of unquestionable value. One efficient Heading followed immediately by a full dose of Calomel, will very generally promptly control the symptoms, and sometimes entirely relieve the patient—

In acute inflammation of the serous membranes also, Calomel if given at a proper time, and in full doses will exert a very salutary influence. That it has the property of controlling local inflammation is an indisputable fact. How this influence is exerted, is a question I shall not stop to discuss. It is most probable however, that it is brought about through the medium of the Circulation. A very interesting illustration on point occurred in my practice last winter. A young man thirty-

from a horse and had his Skull badly fractured and depressed. I applied the Trephine, and elevated the depressed and he was more sensible, and composed. I saw him forty hours after the operation, his symptoms were unpromising, he had raving delerium &c. after adjusting the dressings so as to evacuate some bloody serum which had collected, he was more quiet. When about two scruples of Calomel were given him to be followed by pills in 8 hours if they did not operate. the medicine did well. saw him thirty six hours after he was quite salivated and from that time he rapidly recovered

In acute peritonitis. there is also much respectable testimony in favour of an active mercurial treatment after the inflamatory symptoms have been controlled by bleeding. Calomel given with with a view to its Cathartic, and

Constitutional Effects, has been very satisfactory in its operation, and is perhaps the only treatment upon which we may with propriety rest our hopes of success, although we do not portend that other valuable curative measures should not be resorted to —

The above remarks very well apply to the treatment of Bronchitis & Pneumonia, in both of which I have had occasion to notice the highest Effects from a Mild alterative action. It must however be confessed, that in the diseases of the Stomach & Viscera, Mercury does not seem to be so Effectually remedial, as it is in diseases of other localities —

In the treatment of Dropsy, Mercury is regarded as valuable, Combined with such remedies as will Excite the Secretory Functions, it often proves Specially beneficial, the property it possesses to stimulate the absorbent system to take up Effused

fluids is brought into action, for while the blood is being deprived of its due proportion of serum, by the action of the diuretic, and hydragogue remedies, with which mercury is usually exhibited in this disease, it stimulates the absorbents to take up the Effusion to supply the circulation with that, of which it is deprived by the action of the remedies above named— And in addition, the Effect of a mild alterative action upon those visceral derangements, upon which dropsy so frequently depends as a cause, is calculated to place this remedy before us, in such an aspect as will justly claim for it our entire Confidence in this disease— I have known pills Composed of Blue mass & digitalis to Effect a speedy, and permanent, Cure in a number of Scrofulous Cases——

Females after delivery are frequently disposed to fever from various causes,

They are often thirsty, and restless. under such circumstances it has been my practice, to give them a few grains of Calomel at night, to be followed by a saline draught, and always with good effects. And I have no doubt, that a little attention to this matter, will frequently prevent those inflamatory diseases with which our puerperal patients, are often so grievously afflicted.

In derangement of the Catamenia. Especially in painful menstruation, mercury is a valuable remedy. the Blue pill given between the menstrual periods so as slightly to effect the gums, will very certainly relieve the sufferer. and this fact, one which I have frequently attested, goes very far in my mind to settle the controversy with regard to the Character of that discharge. and is decisive in favour of its being a secretion.

In all Chronic diseases of the abdominal viscera. Mercury will often do much good in the form of Blue pill, and frictions of the ointment to the External surface it is very commonly us'd and with satisfactory results.

With regard to the comparitive value of the preperations of mercury, Calomel is the most important and useful. Especially in the treatment of acute diseases - Blue mass is probably best in the treatment of Chronic disease

In Cutaneous diseases the Red precipitate in the form of an Ointment is frequently us'd. and a weak solution of Corrosive sublimate is positively death on the itch

Mercurial Ointment is frequently us'd by rubbing on the External surface in visceral indurations. and in bad cases is sometimes applied to blister'd surfaces with the best Effects

Combin'd with Iodine Mercurial oint=ment forms a valuable discutient ap=plication to chronic enlargements, wherever found upon the surface.—

To Counteract the effect of Mercuri=alization, the acetate of lead with the infusion of Opium is the best remedy with which I am acquainted.—

and if the condition of the Stomach and bowels will admit of it, the addition of a small portion of the tartrate of antimony will be useful.

Let the above remedies be taken according to circumstances, and the worst cases of salivation, will yield very speedily to their influence—

An

Inaugural Dissertation

on

Blood-letting

Submitted to the Examination
of the

Provost Regents and Faculty of Physic
of the

University of Maryland
for the

Degree of Doctor of Medicine
by

Feb 1846 Marcus D. Richardson

The subject of bloodletting although it has received attention from the ablest Physician down to the humblest Student, is still worthy of our notice, from the conspicuous station it holds in the Catalogue of remedial agents. There is no remedy which arms the Physician with such strength, in staying the march of some of the most formidable maladies, which he may be called to encounter, as this agent when timely and judiciously employed. And on the other hand; it may become in some instances the most sudden means of destruction in the treatment of some diseases. In the language of another, bloodletting is very powerful for evil as well as for good. From the frequency with which this remedy is employed in the treatment of disea-

ses it is obvious to every one that it may be used to disadvantage as well as to advantage. And such being the case it is as necessary to speak of the abuse of it as it is to speak of its use. Like all of our most potent remedies this invaluable one may be used under circumstances which instead of bringing the relief which is so ardently looked for it becomes a scurge instead a blessing in the hands of the Physician by its misdirected influence. If this be true then it is obvious that its employment requires some discrimination and caution when it is resorted to. There is nothing perhaps which becomes a more perplexing point of decision to the Physician than the propriety of resorting to the Lancet when the indications

for its use are vague and uncertain.
It therefore becomes necessary that
something should be said in relat-
-ion to the indications which are
to guide and govern us in the use
of bloodletting. These vary greatly as
every one is aware in different cases,
in different individuals, and in the
same individual, at different times.
The instructions which we get from
our preceptors and teachers on this
point are by no means positive
nor is it possible that they should
be, as they themselves tell us that our
judgment must guide us when
the indications are doubtful or
uncertain. The guide to some
Practitioners from time immemori-
-al has been the pulse alone, and they
take this as their compass to guide
them in every case without consid

ering fully its Character. The pulse although it furnishes us with valuable indications for the employ-ment of bloodletting, yet under certain circumstances it is exceeding ly fallacious, so that it cannot invariably be relied on as the only means to direct us. The Character of the pulse by which we are generally to be directed in the employment of the Lancet is its hardness. which in most instances tell us that inf-lamation is going on somewhere in the economy, The hardness may exist with frequency slowness or fullness. If the above indications of the pulse exist together, we are warranted in the majority of cases that we will do no harm, but that we will do good by the abstraction of blood.- But no single quality of the pulse,

Can ever be relied on alone. without considering other important points which will be attended to in their proper place. Dr. Watson remarks in his invaluable treatse on the Practice of Medicine, that hardness of pulse may sometimes mislead us and induce us to use free depletion with the Lancet when there is realy no inflamation present. He speaks of it as occuring sometimes in certain chronic discard conditions of the heart. When the pulse becomes habitually hard, and to bleed under such circumstances would not only do no good but would aim a fatal blow at the patients life. The next question which presents itself in relation to the pulse is how are we to know that we have carried our remedy far enough taking the pulse as

our guide. Why The pulse informs us generally by its becoming soft and compressible, and when that result is obtained we have evidence that bloodletting has been carried to its proper extent, and to go beyond this with the hope of cutting short a disease by bleeding alone would be subjecting our patients to extreme danger. The practice of bleeding in every disease where there is inflamation until the pulse is brought to its exact standard in health is a practice which ought to be condemn-ed by every reasonable man in the profession. The Physician cannot by any practice cure a disease as most persons suppose by any treatment which he may interpose, he has only to moderate as far as he can the diseased action, which is going on

in the economy, and if he does this much he is doing a great deal and nature will accomplish the rest her self if not too much interfered with by the Physician. The next thing to be considered when bloodletting is to be used, is the nature of the disease and the character of the tissue involved in the disease. It is highly essential that these should be attended to as much as to the character of the pulse. In Inflamations of Vital Organs and of organs which are essential to life. the use of the Lancet may be carried to a greater extent than in those organs which are not so essential to life. Thus in active inflamations of the Brain and Lungs, depletion by the Lancent may often be carried to almost an incredible extent, not only without any detriment to the patient

but is often productive of great benefit. Next to inflamations in the substance of organs bloodletting is better borne in inflamations of the serous membranes. And indeed blood letting combined with mercury is the only means which we possess in Controling the inflamation which is going on in these tissues, as there is nothing which tends so promply to arrest the effusion which may take place, as the combined efficacy of these two remedies. But for these the Physician would often stand by and watch the destruction of his patient without the possibility of bringing relief to his sufferings. The character of the pulse which was spoken of in another place which is its hard ness is not always present in in flamations of the abdominal organs.

or in the serous membranes of the abdominal cavity. In Peritonitis for example when it has existed for a short time the pulse becomes frequent weak and threadlike but still inflamation is going on in that or-gan and will run its course very rapidly if bloodletting is not freely and judiciously employed. This frequency and smallness of pulse is almost entirely characteristic of inflamation of the abdominal or-ans for in no other organs do we rarely ever meet with this condition of things when acute inflamation is present. Under such circumstances the pulse would be a very unsafe guide to the young Practitioner and he might be lulled into the belief that all mischief had ceased and thereby withhold the use of the Lancet

and the death of his patient would almost necessarily be the inevitable result. In such instances the severity of the pain, and the disturbance and intensity of the constitutional irritation would be the indications and not the pulse. If our diagnosis be correct in supposing that we have peritoneal inflamation to deal with, we might safely lay aside the pulse, and attend to the indications the other symtoms presented. The stage of any inflamatory disease forms an important element in the consideration of this subject. Bloodletting if admissible in any disease should be practised as early as possible in that disease, as that is the only time at which it would be beneficial. If it is defered until the disease has made con-

siderable progress and will termi-
-nate rapidly in recovery or death.
the time for this remedy has passed
and if practised late in the disease
it would only tend to prostrate the
powers of life and by this means
preclude the hope of recovery by-
any other treatment. Our object
in bleeding early in any disease
would be to procure resolution of
the inflamation if that event could
be obtained, and by this means pre-
vent the disorganization of structure
which would likely follow. But if
inflamation has gone on to any of
its terminations bleeding would not
only do no good but would be posi-
-tively injurious. It is dangerous to
temporize in acute inflamations with
minor remedies, when we are aware
and convinced of the fact that it is

present, active depletion by the Lancet in such cases is almost our only resource. There is one tissue in the economy which I had almost forgotten to speak of in which active depletion by the Lancet is not follow-ed by such beneficial results as in the other tissues which I have spoken of. I refer to the mucous membranes, here bleeding does not manifest such beneficial results as it does in parenchymatous organs. But even the diseases of mucous membranes it may sometimes be used cautiously with advantage. To point out and speak of all the diseases in which blooletting is useful would require more time than could be given in an essay so short as the present one. The object is merely to notice some of the most striking and interesting

facts with which this interesting subject abounds. It may be necessary in the next place to speak of the manner in which bloodletting is performed. in the first place it is divided into general and local and we may use one or the other of these modes or both conjointly. When blood letting is deemed necessary in any disease we should endeavour to effect our purpose with as little expenditure of the vital fluid as possible. The posture in which we place our patients is a matter of no little importance when we are going to make use of Venesection, about which there has been a great diversity of opinion among the best Authors. Some contending that it is better to bleed patients in the erect, others contending for the propriety of the recum.

bent posture. As for our own humble opinion we think the erect posture the best and safest method. We can produce an impression on a diseased more speedily when we bleed our patients in the erect or setting posture than when they are laying flat. It does not require such an amount of blood to produce the same desired results and by this means we save our patients blood and strength which they must have to recover from any disease. If we rob Nature of these resources, all of our treatment will be in vain. The reason of this scarcely requires any explanation. Venasection might be used to an enormous and fatal extent in the recumbent posture before we could tell that we had bled sufficiently

But in the erect posture, Syncope and the pulse tell us, that thus far shalt thou go and no farther. On the other hand we have nothing to warn us of the impending mischief which may ensue. It is impossible to state any precise rules as to the quantity of blood which is to be taken in any disease. These are to be left to the discretion and judgment of the Physician. We judge in some instances by the appearance of the blood, a very unsafe guide. Some authors tell us that when we find the blood presenting the buffy coat and cupped, it is an indication that we should renew our attack with the Lancet until we subdue the inflamation. But in some instances we might bleed and keep on bleeding until

we have sucked the last drop of blood circulating in our patients body and still the blood will present the same appearance. They seem to forget that patients require blood for the support of the body and to carry on its functions in a state of disease, as well as in health. After speaking of the use of this remedy it is necessary also to say something of its abuse and its doubtful propriety in some diseases. That it may be abused there is hardly any one for a moment will doubt. There is one class of diseases in which the use of bloodletting as a general means of treatment is by no means well established. The class of diseases here refered to are fevers, as they are met with in different parts

of the Union. Every one is aware probably of the difference of opinion which exists among Medical men about the use of bloodletting in fevers. Some say that they trust to bloodletting alone in the treatment of fevers, others say that they reject it altogether. To my mind the use of the Lancet in fevers in any stage and almost under any circumstances is an uncertain, and most pernicious remedy. In the first place if we believe the doctrine that the cause of the fever or the morbific agent which produces it first makes its impression upon the nervous system, it seems to me that it is absurd for men to say that they cut short or cure fevers by bloodletting. Or even if the morbific

agent exerts its injurious influence upon the vascular system at large we might bleed until we bled our patients to death's door and still the poison would not be eradicated from the system. Fevers have never yet been demonstrated to be inflamatory diseases, nor do they present any of the regular phenomena of inflamation. It is true that there is acceleration of the pulse generally and preternatural heat of the skin, but these alone do not constitute inflamation. And when we have not the characteristicks of inflamation in a disease we can derive no benefit from the use of the Lancet but may do a great deal more harm by its use than if we did nothing at all. Most

all fevers will generally run their course, in spite of any treatment: and sometimes they will get well without any treatment on the part of the Physician. It seems to me that it is impossible to eliminate any morbific agent from the system like that which produces fever by bloodletting in any manner that it may be used. Some Physicians even go so far as to say that they bleed their patients in the incipient stage of Typhoid Fever, and that too with advantage. In answer to such Physicians we would say that if their patients recovered under such rigorous treatment that they were wrong in their diagnosis, and that they were treating some other disease for Typhoid Fever.

Every one who has had any experience in the treatment of this fever knows that it will not bear active treatment of any kind, that we can neither bleed nor purge with any safety to our patients. This is true not only of Typhoid Fever but of all diseases which assume a Typhoid type, where the powers of life are prostrated and overwhelmed. Yet the use of the Lancet is not to be altogether denied, its use is often imperatively called for in these affections. Continued Fevers in certain districts of Kentucky have had a tendency for the last few years to assume the Typhoid type at some period in the course of the fever, and bloodletting in such cases has always been positively injurious. No treatment at all

or the simplest that can be used, has been followed by better results in continued fever for the last few years in Kentucky, than any other. Another circumstance which may sometimes be carlessly overlooked by the Practitioner in the treatment of some inflamatory affections is the idiosyncrasy, age, habits, and sex, of the patient. a knowledge of these facts is often may almost always of essential service to the practitioner, for the successful management of a disease. It is obvious to every one that a routine plan of treatment for the same disease in every individual without regard to peculiarity of constitution must be a very uncertain and dangerous course in the practice of Medicine. Yet how often do we hear of and see

The old Physicians as well as the young pursuing this routine course in their practice. When they think that they have established the fact that they have an inflamatory affection to treat they carry bloodletting to the same extent in the old as they do in the adult. Old persons have generally very little blood to spare even when they are labouring under the most intense inflamation. Indeed we may say that they have scarcely enough blood circulating in their systems to keep them alive, as the blood-making apparatus in advanced life is very feeble and inefficient. If what has been said there is true in relation to this matter would it not be better to trust to the efforts of nature and mild treatment than

such bigorous measures when we meet with inflamatory affections in very old persons, and persons of broken down constitutions. I think the fact is selfevident to every one, and requires no farther consideration. A few of these minor circumstances as they would seem which I have just spoken of may be very justly applied to Prof. Drake who occupies the Chair of Pathology and Practice in the Medical Institute of Louisville Ky. A Physician of considerable reputation and esteemed a scientific man by the Community in which he lives. Prof. Drake delivered clinical instructions to the students at the Marine Hospital - and during the Winter we saw him treat and lecture upon a great many cases of Pneumonia. He tried to

impress the belief upon the class that they could hardly bleed too much in that disease. But the results of the Doctor's practice by no means proved the value of such heroic treatment as he was very unsuccessful in his management of that disease. Patients were brought to the Hospital in whom Pneumonia had existed three or four days, men of bad habits and broken down constitutions. Yet they all were copiously bled alike, according to the Professor's directions when the time for bloodletting in this disease had passed. We bled all indiscriminately alike without regard to the time the disease had existed or the age, sex, or habits of the patient. And when a patient was supposed to have Pneumonia by the Professor, we could generally

augur correctly the prognosis. Which was in three fourths of the cases death. Prof. Drake would even bleed in Typhoid-Pneumonia that most frightful form of this malady, when there was no inflamation, the patient complaining merely of weakness and prostration. Under circumstances which I have just enumerated in which blood letting seems to be contraindicated there is one artical in the Materia Medica of inestimable value in some inflamatory diseases. The artical refered to is Tartar-Emetic. This agent is almost equal in its depletory and sedative effects to the Lancet, and under certain circumstances is far preferable to it. In some inflamatory affections where we have to guard against weakning the patient by too copious or even moderate bloodletting, We can

generally obtain the ends of depletion by Tartar-Emetic if properly exhibited. This article possesses the advantage of reducing the action of the Heart and Arteries without exhausting the strength and blood of the patient: and it is one of the most efficient means we possess of keeping active inflamation at bay. And if we were not in possession of this valuable Medicine we would possess no control scarcely over inflamation in some tissues. Before concluding what we have to say about bloodletting as a remedial agent it will be proper to allude to some of the immediate and remote injurious effects which may arise from its use. In the first place if caution is not used in some cases in which we resort to it a

fatal syncope may be speedily
induced. And among the remote
effects of it Amaurosis and excessive
irritability of the Nervous System.
and a number of other affections
have been mentioned as being pro-
-duced by the excessive and injudi-
-cious use of this remedy. Indeed in-
-ordinate bloodletting very frequently
lays the foundation and paves the
way for a number of Chronic dis-
-eases, which the limited number of
these pages will not allow us to me-
-ntion. Our distinguished Professor
of Materia Medica in his lecture
to the Class upon Bloodletting told
us very appropiately that its ten-
-dency unlike some minor remedies
was almost certain to do harm if
it did no good. And that its action
upon the economy was not so

innocent when doubtfully used,
as that of some of the more tri-
-fling articles of the Materia Medica
Hence the degree of caution required
when this remedy is to be used in
the treatment of some diseases. And
in conclusion, it will be a consol-
-atory reflection to the Physician who
resorts to bloodletting in the treatment
of disease, for him to say, that if
he has done no good with it, he has
done no harm.

Guilielmi Gibsonii

Thesis Inauguralis

De Variolis et Vivi Inventione Vaccini;

Praefecto et Professoribus

Universitatis Marylandicae

Proposita Gradus Gratiâ Academici

Medicinae Doctoris

Morbi latè vagantur, vastantque omnia loca, quae incursant; et quanquàm Corpus humanum esse mirabilè formatum cuique patet, ex solidis fluidisque potentia motrici donatis Compositum, ideoque legibus solidorum vel fluidorum in motu parere, easque partes mutationes internas propria constitutione insitisque viribus pati, attamen non ullis satis provisum est, Sanitatem conservare, vigorem tam corporis quàm animi actionem confirmare, morbumque invenientem praecavere. Quis, ergo, me reprehendat, aut quis mihi jure succenseat, si, Medicinae amore illectus, multo mane ad multam noctem, de die in diem, per alta atque angusta, diù multumque in ejus studiis insudavi, et quantum caeteris ad suas voluptates fruendas, et ad ipsam requiem animi et corporis conceditur temporis, tantum mihi ego-met ad haec studia recolenda sumpsero?

In ore sunt omni populo Variolae, virique vaccini vis morbo venienti occurrens, et mihi nullam materiam pro dissertatione magis idoneam his temporibus in

conspectum venire videtur. Sed necessarium sit de diversis qualitatibus et aeris mutationibus antedicere, namque morborum multorum causae deveniunt, quamvis non sensibus modus operandi patet, et fortasse in tenebris semper jacebit. Verumtamen mihi videtur aera nimium humidum, atque calore et levitate peccantem, corpori infestissimum esse omnium complicationum, et naturam summe relaxantem et putrefacientem. Sic sanguinis circulatio retardatur, resistentia externa humoribus intra vasa pulmonalia contentis minuitur, fibrae laxantur, et debilitantur, perspiratio decrescit, et humores nimis aquosi reddentur, ob nimiam humidatatem cuti et pulmoni externe applicatam, per venas fibulas intus assumptam, totique corpori interne adhibitam.

Jungne adsunt aliae non minus potentes, inter quas particulae morbificae, miasmata dicta, aerique innatantes, eminent. Miasmata haec deleteria per nares admissa, cerebrum nervosque primo afficiunt; in ventriculum cum saliva delata, vomitum atque

praecordiorum anxietatem; in venas assumpta, sanguinis putrescentiam et dissolutionem producunt - hinc delirium, calor intensus, sitis inexhausta, et caetera. Sic, semina variolarum in aere volitant, per aera propagantur, in corpore humano multiplicant, iterumque viribus auctis ad eosdem morbos propagandos exeunt, aliquando magis, aliquando minus, secundum aeris et corporum dispositionem, agentia. Haec transmissio miasmatum morbificorum ab aegro in sanum quam citissime aegrotantium dejectionibus, dein spiritu, postremo perspirabili materia efficitur. et praecipue in veste adhaerescit, vimque suam retinet per longum tempus; sed infectio aere perflabili et sicco, igne, munditieque mitigatur, atque in gravibus et contagiosis tempestatibus, sanitas modica exercitatione, dieta nutrienti et corroborante, balneoque frigido tuenda est - evitatis aquosis, refrigerantibus, nocturno aere, solis calore, frigore, fatigatione, et omnibus quae contra consuetudinem sunt.

Variolae in discretas, confluentes, et modificatas

distinguuntur, morbus ejusque curatio in stadium
febris primariae, stadium eruptionis, stadium tertium
suppurationis, cuiusque febris secundariae divi-
duntur. Morbi tentatio subitis horroribus advenit,
insequenti stadio febrili a miasmate variolose cum
sanguine mixto, atque duos, tres vel quatuor dies
ante macularum originem durante - siti, calore,
nausea, vomitu, pulsu celeri duroque, faucium
doloribus, capitis dorsique, et officii superioris
ventriculi Comitantibus. Hisce supervenient som-
nolentia, oculique scintillantes tenuem humorem de-
stillantes. Plerumque primo in facie, quartum cir-
citer diem, apparent puncta parva, rubra instar mor-
sus pulicum, apicesque indentatos habentia. Postea
in pectore et brachiis, posteroque in toto Corpore conspi-
ciuntur. Hinc aspera evadunt, albescunt, et pure
splendent; fauces inflammantur, tument, dolentque
a pustulis interne irrumpentibus; facies turnescere
incipit; palpebrae materia serosa turgescere; punc-
torum interstitia a tentione subsidere, os tenui saliva
scatere, quae gradatim ad veram salivationem au-

getur a nisu naturae ad reliquias materiei variolosae expellandas. Postremò pustularum suppuratio terminatur, in facie primò arescere, et flavescere incipiunt, suos sacculos rumpere, atque cutis nunc crustis aridis infestatur, postea decedentibus, vestigiaque alte impressa relinquentibus.

Morbillis miasmata variolosa sunt persimilia, eandem originem habent, similique contagione per orbem vagantur, nec plus una vice, nisi perquàm rarissimè, quemquam corripiunt, atque teneram aetatem praecipuè adoriuntur - sed in tenella aetate, mitior morbus, in magis firma et provecta vehementior.

In posteriore prognosis eo periculosior, quo tardior eruptio; atque si pustulae iterum sese recondunt, cum delirio, signum est mortis imminentis; sed si livescunt, magnum adest periculum. Quoque nimia rubedo vel pallor pustularum, virium prostratio, vomitus, deglutitio difficilis, signa mala sunt.

In morbo priore, quò pustulae magis confluentes, quò numerosiores in facie et corpore, quò magis depressae, quò febris minor remissio in secundo stadio, eò majus pe-

riculum. Atque si pus album, viscidum, saccu-
losque optimè distendit, indicium adest faustum. Si
e contrario fuscum et tenue, pustulaeque flavescunt,
indicium infaustum. Si liviscunt interstitia, vel
ipsae pustulae, mortis est signum instantis. Quo ma-
gis interstitia rubent, eo melior spes; quo magis pal-
lent, eo pejor.

Indicatio curativa febris mitigationem postulat, ut
separatio humorum morbosorum a sanis promoveatur;
exclusionem totalem materiae morbificae, et quo minus
serpat, ejus expulsionem e Corpore. Febris venaesec-
tione, pulsu, viribus et symptomatibus mensurata, mit-
igatur. Dein potiones diluentes, demulcentes, et med-
ica diaphoretica prosunt, et materiae expulsio, quan-
do caput occupat, vel longius in vicinas partes ser-
pit, lenissimis laxantibus et vomitu optimè perfic-
itur, atque si dolores in initio ventriculi adsint,
fomentationes emollientes applicentur. Tenuissima diета,
maltus potus acidulus, cum diureticis et laxantibus
conveniunt, sed praecipue alimentorum ratio in quan-
titate et qualitate habenda est. Nutritioni optimè

inserviunt alimenta blanda et insipida, quae mucilaginem vel gelatinam secundunt, et texturam non nimis firmam vel teneram possident - denique Caveant Convalescentes ne nimis praematurè sese committant frigido aeri, plectantur enim postea iterato in morbo.

Vis Inventis vaccini.

Hoc est finis hujus morbi maximè horridi et pestiferi, temporum recentium maximae luis; et per quem, ante vaccini vis inventionem, plures quàm quadraginta millia hominum, in annis magna in Britannia obierunt. Doctori Eduardo Jennero inventionem divinum prophylactarum vis vaccini debemus. Accersitus in varias partes gratis inoculandi, levamenis variolarum a Domina Maria Montague antea introducti, non potuit inoculando variolarum indiciis multos efficere, propterea quod eorum corpora priusquàm morbo singulari contacta fuerint, per mulgendum vaccas quorum ubera ulcusculis affecta fuerint. In hoc discrimine illustris Jennerii ingenium se explicuit. Sedulam ac indefatigatum indagatio-

nem instituit, et ardore ambitioso sed laudabili prosecutus est, saepè obscurato sed non extincto difficultatibus paenè insuperabilibus.

Ad initium investigationis impedimenta magna duo Doctori occurrerunt. Primò; exempla non defuerunt quibus ad speciem variolarum vaccinarum experta fuerunt, et tamen corpus fuit luis variolosae suscipiens. Secundò; multi qui reverà variolis vaccinis affecti fuissent, postèa variolis humanis correpti sunt, omnibus cum indiciis quasi ullum priorem eruptum nunquam experti fuissent. Priorem harum difficultatum Jenner celeriter resolvit, discriminis inter veras et falsas variolas vaccinas inventione, quod non antè cognitum esset. Et tunc verum patuit, vaccam varietati ulcerum sub communi nomine variolarum vaccinarum esse obnoxiam, omnia quorum luem contactu impertiuntur. Secundam difficultatem hic indagator indefatigabilis resolvit,* bovem inveniendo posse hodie communicare alicui suum morbum, et cras non valere.

Hoc indicio manifestum fuit, ut virus variolarum

* Inveniendo ut bos hodie posset communicare suum morbum, et cras non posset.

vaccinarum omnibus mutationibus subjectum fuerit,
quibus virus variolarum humanarum; et, quando-
cunque hae, speciales vires deperierint, ut quamvis, in decom-
posito et statu degenere, cutem ulcisculis afficere
posset, variolas humanas efficaciter praevertere non
posset. Hoc triumpho parato, Jennerus pulavit,
inserimen particulae vaccini viri in brachium in
morem inoculandi, utilem esse futuram ad mod-
erandum vim variolarum. Quapropter in experimen-
tum veri, in brachium cujusdam juvenis Phippii nom-
ine, aliquantulam puris ex ulcere bovis inseruit, et
eventus rei opinionem quam formaverat confirmavit.
Successus hujus periculi confidentiam inspiravit, et
multa alia experimenta, plerumque utilia, secuta
sunt.

Experientia per multos annos Jenneri inventionis sin-
gularem efficantiam indubitanter comprobavit, quod
ex confesso est unum maximorum beneficiorum ex
scientia medica in humanum genus diffluentium —
non solum eladem ex variolis minuens, sed post
vaccinationem homines plerumque lue grassante, aut

inducto ab inoculatione, conservans. Nostra in urbe multi, in quibus vaccinatio fuerat perfecta, nuper quodam genere variolarum modificato correpti sunt, qua ex re timores vani et objecta inania orta sunt. Quidam totam impotentiam viri vaccini praedicant ex lue variolosa corpus conservare; et alii vim prophylacticam putant paucos per annos durare. Haud dubito quin quum vaccinati morbo varioloso correpti fuerint, eorum vaccinatio imperfecta fuit, ex vitio puris vaccini, aut praesentia alicujus morbi cutanei (cuticularis). Ego ipse retuli vaccinationis dubium magna ex parte viri vaccini deteriorationi per magnum numerum hominum delati. Et quamvis nonnullos scriptores legi qui experientiam esse aliam praedicant, confiteor non alioquin patefactum est mihi. Vagò creditum est nuper virus vaccinum per longum tempus fieri effoetum, et revaccinationem necessariam esse ad conservationem ex lue variolosa. Idem scriptores quos supra memoravi hoc quoque corripiunt, et vaccinationem secundam affir-

mant corpus non conservare magis tuto quam priorem, atque vaccinationis potentiam ex recente aut ex longinquo tempore non pendere, quo corpus vaccino vivo affectum fuerit. Sed tales dubias quaestiones thesis fines praecludant, et quo illas inveni, relinquo "Sub judice".

Guilielmus Gibbs

Datum die vigesimo tertio
mensis Februarii, anno
reparatae Salutis 1846.

Thesis.

An

Inaugural Dissertation,

Submitted to the Board of

Regents, and Faculty of Physic,

of the

University of Maryland,

For the Degree of

Doctor of Medicine.

By

Wm. M. Hunt.

1846.

To

Nathan R. Smith, M. D.,

Professor of Surgery in the

University of Maryland,

As a token of the respect and

Gratitude due to his ability

And kindness as a Preceptor,

This Dissertation is

Most respectfully Inscribed,

By the

Author.

The responsibilities of the Medical profession are so numerous and weighty, that humanity looks with no little interest toward those who, by authority from the State, accredit the agents of Medical Science, who are to apply its doctrines in practical effort, which may involve the health, happiness and life of many, and those, perhaps, important, members of society. How appropriate, then, that the candidate for medical credentials should be subjected to all proper investigation of his capacity, his acquirements, his zeal and honorable ambition to maintain and to advance the means and the usefulness of his profession.

In submitting this Thesis, as one evidence of medical competency, the writer is at once sensible of the right of the University to demand such testimony, and of the importance of doing justice to himself: for while the health and happiness of

his fellow citizens are to some extent involved in his graduation, so requiring that his qualifications should be sufficient to the duties of the profession, into which he desires admittance; his own reputation and prospects for the future are deeply concerned in his success, and demand of him a becoming effort to acquit himself in a manner, at least equal to his actual ability. But this latter task, is not of easy accomplishment. The heart vain and confident of creditable energies and abundant resources, will sustain the hand, in an exhibition of this kind; and urge on with warm and glowing impulses to the presentation of the most favorable aspect of intellectual capacity which the facts in the case will warrant: and, yet, so sprightly an effort might well be mistaken by the accomplished Faculty Even, for the buds only of the future intellectual fruits; and so ultimatum be accounted at but a mere incipiency; hopes excited never to be realized;

large credit and applause bestowed, where but little had been really earned: while, on the other hand, less self conceit, less appreciation of one's abilities and acquirements, connected with a dread of failure, cramps the mind most embarrassingly, and refuses to the pen the use of the full amount of mental vigor and resources really possessed.

Without intending a self application of the remark, it is allowable to state, that real talent is often accompanied with much modesty, and that the most competent do not always succeed well in intellectual or educational ordeals. And, though it might be taken for granted, that a candidate for Scientific credentials, who is restricted by mere sensibility, in the execution of a trial thesis; would be deficient in the firmness and vigor needful to a useful professional career: yet, it should be recollected, that the Medical Profession, at least, would not be suitably occupied by only one class

of mind: for while boldness and enterprize occasion the projection of experiments, and often strike out new and successful paths to splendid success; the timid, the cautious, the prudent, the hesitating, preserve the doctrines of the day from being thrown into discredit and uselessness, until they are fairly and properly displaced by actual demonstration of their falsity.

But for this, the Science of Medicine would return into Chaos. Light and Order could not be preserved.

Rash, heady, empirical men are often successful in blinding the popular eye; and self interest ever prompts to popularity, rather than to the self sacrifice, that integrity, truth, and honor not unfrequently demand. Often too, prodigious intellectual power is combined with with a morbidly brilliant imagination, and thus Society receives an enthusiastic visionary; despising the terra firma of fact, and perpetually engaged in ballooning through

the higher, but unsuitable regions, of professional fancy. Society, in either, and in both cases, must suffer; and would suffer more, much more, but for minds of different moulds; which respect the existing facts of the Science, and, from a natural timidity and prudence, refuse to yield them up as errors, except in a rational and careful manner; while they also refuse admittance to all new theories of practice and items of Materia medica, until they have been sufficiently tested by proper investigation and trial.

In this way, the various classes of mind are auxilliary to the credit and progress of the Medical Art. Without the impulsiveness of the more brilliant order of intellect, as exhibited in eccentricities, bold experiments, and an enterprize bordering on the visionary; there would be but a sluggish movement toward the accumulation of knowledge and agents, still so much

needed by the Art: while, without the sturdiness, hesitancy and confidence of the less thoughtful laborious minds; the Art would soon degenerate into mere Theory and Insanity.

The beautiful, buoyant, sportive Atmosphere in connection with the solid Earth, is an admirable arrangement: a useful blending of mutual influences; resulting in great and permanent utility: but what would the Earth be without the Atmosphere, or the Atmosphere without the Earth? It is best, that they coexist, and maintain there proper relations.

Aware, that these premises are but trite to the learned Faculty, whose province it is to decide upon the merits of this Thesis; as well as to determine the lot of the writer, in view of his application for their Authentication of his medical Competency. it is with some degree

of hope, that this paper is conducted towards an exposition of its important subject, the pallid, debilitating, and, too often, resistless Phthisis. And the same premises will explain, why the writer ventures not beyond the present doctrines in the case. He prefers to confide in the results of the toils and observations of more learned and experienced men: until he shall have had an opportunity to extend his personal survey of a disease, which has taxed to their uttermost, the abilities of many of the most distinguished professors of the Science.

But that it is of any promise to the Healing Art, or a proper response to professional obligations, to follow, servilely, the teachings of the books: as if the requisite data of information and skill had been attained; and there were no

other desideratum, than that the novitiate of medicine should accurately understand and becomingly obey the present instructions of our Schools.

Such a course would award to the Science greater honors by far than it has merited yet, or is likely to twine around its brow for many years to come: for it seems to be generally admitted, that, while much, very much has been done, and that in a manner so creditable and efficient as to entitle the Art Medicandi to the respect and gratitude of Mankind; still, it is yet far from having reached those limits, at which, like the Macedonian aspirant, it will find nothing further to conquer.

The writer would only express his conviction, that the incipiency of medical pretensions and practice should be regulated by the

Standard Works of Medical Literature, and the prelections of the venerable ocupants of the Professorships: and that a departure therefrom should be impelled only by such additional information as may be supplied from the lips of experience, careful personal observation, judicious experiment and sound reason, as these lead on the energies of the practitioner and Professor, into proper effectuations, from enlarged discovery.

Especially, as it relates to this fearful Phthisis; this destroyer of the refined, the gifted, the beautiful; this insidious clipper of the life thread of genius; this invisible intruder upon the Sanctum of the intellectual, insinuating the death influence into his vitals, at the silent midnight hour, as by his consuming

will he cherishes the fond hope
of unusual accumulations of
knowledge and the attainment of
vast means of usefulness, with
bright rewards of future and hu-
man distinction: especially in
such a case as this, is it well to
make use of the best aids that
the wiser and more experienced can
supply; until, a suitable trial shall
have demonstrated their mischie-
vousness or inefficiency; or, until,
under the wise providence of the
great Author of Mind, in a faith-
ful employment of one's mental
and professional endowments, he
may elicit at undiscovered, long
concealed facts, to be the basis of
a better theory, controlling his prac-
tice to better results.

It may be well, too,
to recollect, that the present theory
of Phthisis has not been construct-

ed in the absence of research, experiment, profound anxiety and most fervent desire of success against one of the most terrible and dreaded diseases, to which our race is exposed. Hearts that have been properly solicitous for the honor of the Science, and still more so for human health and happiness, have incited the most brilliant intellects, which have adorned the Profession, to the deepest, basest, most vigilant and patient investigations: and the treasures of fact and suggestion by them so honorably and abundantly gathered, are not to be substituted by the crudities of the medical sciolist.

To be sure, the great masses are not scientific. The theory of the Earth's diurnal revolution was flatly denied by the peasant,

he believing it to be disproved by the fact, that the contents of his pot, swinging all night upon the crane, had not tumbled out into the air, as the Earth went over. And so, the most profound teachings of science are the least extensively understood; and the shallow, inconsistent, irrational theories of selfish empirics are easily palmed off, as more reasonably to be relied upon: tempting the practitioner of slender integrity, who is more anxious for gain than to be useful, to tamper with the ignorance of the many, to the prejudice of the Profession and the inestimable waste of life.

Most common theories of Medicine appear very plausible to those who know little or nothing of the human body, or of the Medical Art: while by the learned, they are justly esteemed

from the least consideration: and the popular humor must not be catered to, at the expense of professional integrity and honor. The existing dogmas are worthy of entire regard until the pregnant womb of futurity shall produce others more worthy; and proved to be so by other evidence than mere parturition.

While, then, a vain desire of distinction among fellow graduates, or fellow practitioners, might urge to the presentation or the platform of something novel, extraordinary, startling; a due regard to the great Masters of the Art; a warranted appreciation of the Chairs before which the writer has been somewhat attentive listener to carefully digested lessons; and a suitable sense of personal responsibility; — all combine to deny the aspirations of ambition, and to check the desire

for evanescent though brilliant elisions; if the latter is to be won by the outflashings of a morbid imagination — too often mistaken for the consecrations of true genius — rather than by a becoming respect for the venerable teachings of an illustrious Art, and a solemn concern for the health and happiness of our race.

The writer indulges the hope, that such sentiments and motives as these will appear to be sound reasons for his preferring to move in the path of the regularly orbling planet, to shooting off as a more lustrious, more rapid and wonderful & yet less useful, and speedily vanishing comet. And he now strikes into his subject more immediately, carrying with him, as into the fabled Labyrinth, the trusty thread of authority.

Pathology:— The best authorities distinguish the progress of this fearful

disease into two principal stages; for the sake of method; which, of course, is indispensable in an effort to expel all any process of thought. The first stage consists of the supposed causes and the earliest symptoms and sufferings; and, as is the case with the general subject of originations, here we find much that is shadowy and conjectural: the patients assigning very different causes, and they generally but badly authenticated. But no matter to what supposed or real cause the disease shall have been traced by the patient himself; the practitioner usually finds that the first symptom noticed was a slight and neglected cough; considered a mere cold; attended with expectoration of a frothy appearance though sometimes the cough would be described as dry, continuing months with little or no expectoration.

Sometimes it comes on

in paroxysms, and makes hurried and alarming progress: the sputa becoming less clear, a little greenish and opaque and at length completely changing their characters. sometimes the first fact noticed is haemoptysis, preceding the first symptoms or occuring coincidently with them. The breathing is not much affected at first, and so continues, in some instances, to an advanced period of the disease. Acute pains in the sides of the thorax and between the shoulders are often noticed and complained of; though the respiratory murmur, usually, upon auscultation, has not yet become sensibly changed: though in some instances the respiration is feeble under one of the clavicles, or there is a slight mucous and sonorous rale, there, with less clearness, on percussion, than on the other side.

Derangements of different functions may occur in this first stage even of the disease: alternations of temperature and night perspirations, for instance. Generally the appetite, at first, is unimpaired though afterwards it gradually becomes inert. The strength diminishes and emaciation is presently quite evident.

In the second stage the cough is usually more frequent and troublesome, especially at night. The sputa put on a greenish color, are striated by yellow lines, free from air, and presenting a peculiar appearance being of a rounded shape and as if torn on the edges. Towards the close of life they often resemble pea soup, with a greenish or greyish tinge: often mingled with streaks of putrefaction similar to that of the first stage; while haemoptysis is frequent though not often

copious; the dyspnoea is in proportion to the progress of the disease; the pains in the thorax are often more acute; and sometimes pleuritic symptoms appear and require active treatment. Auscultation now discovers evident pectoriloquy, gurgling rale, or tracheal respirations, in one or more points, corresponding to the summit of the lungs; percussion in some cases dull under one of the clavicles and to a considerable extent. The symptoms of ulcerations of the epiglottis, larynx and the lesions of the mucous membrane of the stomach now develope themselves.

The fever in general is continuous with occasional exacerbations; occuring in the evening with rigors, heat, and perspiration. If the progress of the disease be not very slow, the thirst is urgent.

The appetite diminishes as debility increases, though sometimes the anorexia is complete, yet the mucous membrane of the stomach may remain nearly, or indeed quite, healthy; and occasionally the alvine evacuations are found regular to the last: though diarrhoea usually occurs: sometimes only twenty or thirty days before death, but more frequently at an earlier period. emaciation makes rapid progress, and death appears in the last stage of marasmus, very often without any disturbance of the intellectual faculties.

Treatment:— with respect to this important branch of the subject, the principal hope lies in suspecting the patient to treatment in the earliest stage of the disease. When this has been neglected, the physician has little left him to do, beyond soothing the sufferings of the patient, and listen

ing the asperities of this certain path to the grave. If he be called in time, then the treatment should be prompt and watchful: using the ordinary and approved aids to influence the expectoration and to regulate the diet and exercise. Little, however, can be said here by way of details. There being room for only the principles of treatment, and not for its particulars.

And so, in case of neglect, the patient not applying for aid until it can be of but little avail; the only resort is to palliation, or a change of climate, which has been known, in some instances, when the patient has persevered in resisting all the inconveniences of an absence from home and friends, & has been particular in his diet and exercise, to result most happily.

In fine, the painful facts of the alarming frequency of this disease, its too common neglect during the brief

period of medical availability, the efficacy and annoyance suffered from empirics by a too credulous public, the distress felt by the sensitive practitioner as he feels himself able to do little more than watch the wasting progress of this enemy of human life, at once under Phthisis one of the most interesting of diseases, and urge the most resolute to all possible, minute, varied, extensive, persevering enquiry, contemplation, reasoning and use of remedies. What an imperishable name will his be, who shall succeed in reducing this intractable and terrible scourge of our race, to the class of what may be considered manageable diseases!